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AUTOMATISMI PER CANCELLI
AUTOMATIC ENTRY SYSTEMS

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»BARRERA AUTOMATICA DE CADENA MOD.STOPPER.

STOPPER

CE

MANUAL DE INSTALACION

V07.18

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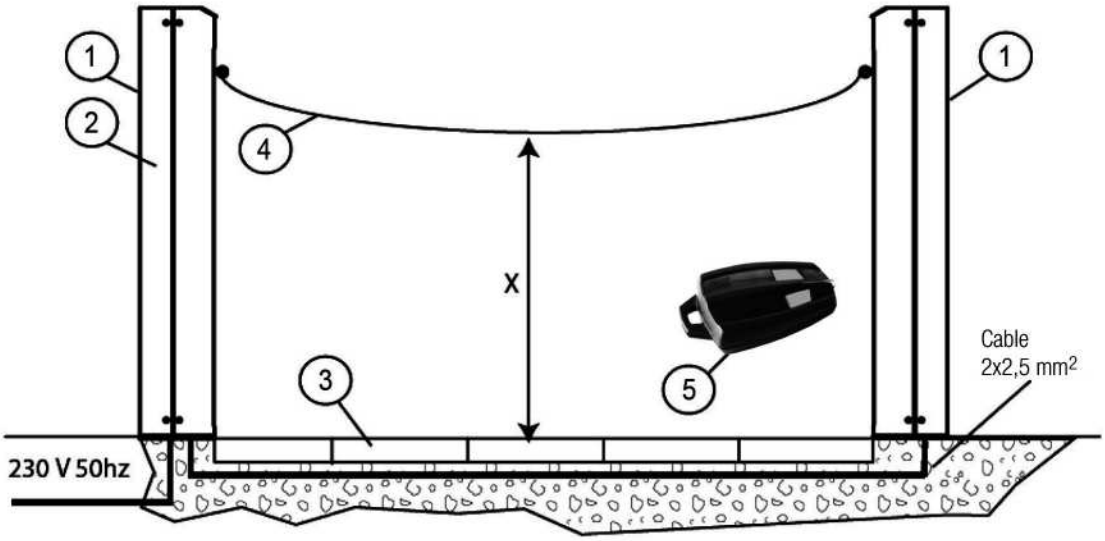
»BARRERA AUTOMATICA DE CADENA MOD.STOPPER.

TECHNICAL DATA / INSTALLATION STOPPER



1

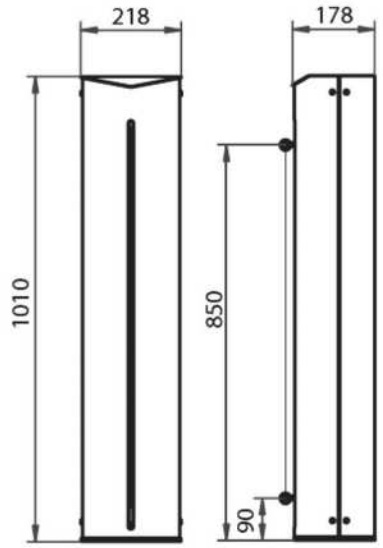
Description:
1 - Chain barrier STOPPER
2 - Control unit
3 - Chain protection ramp ACG5481
4 - Chain ACG5480
5 - Radio transmitter

Lenght of the chain (m)	4	6	8	10	12	14	16	18	20
Relative height in the middle X (cm)	75	70	65	60	55	50	45	40	35

ATTENTION: The value in the table has been determinated using a chain of 400 gramms/meter.

TECHNICAL DATA		STOPPER
Power supply		230 V- 50/60 Hz
Current Draw	A	1
Motor Power	W	60
Force	Nm	645
Service		50%
Operating temperature	°C	-20 ÷ +55
Protection Degree	IP	34
Lubrification		Permanent
Weight	kg	25
Max chain weight	kg	8,5

DESCRIPTION AND DIMENSION OF THE COLUMN



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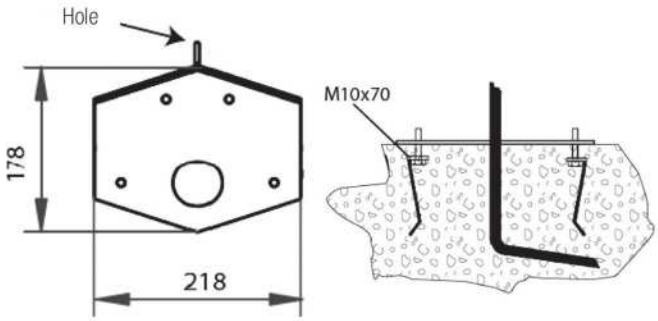

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INSTALLATION

All measures are expressed in milimeters unless otherwise indicated.

PRELIMINARY CONTROLS

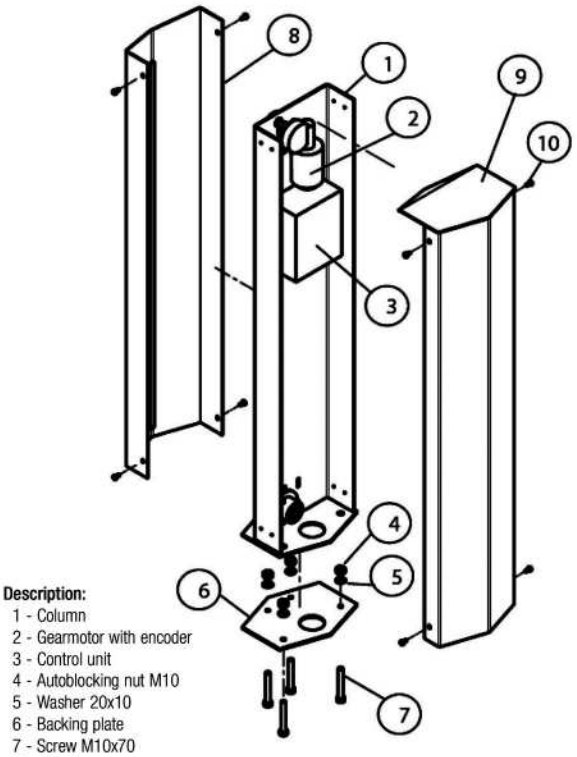
- Control the stability and solidity of the zone where the columns are going to be fixed.
- Use an omnipolar interrupter with contact distance of at least 3 mm.
- The connection to the power supply must be seperated than the connections to the security and commanding devices.

INSTALLATION OF THE COLUMN (fig. 1, fig. 3, fig. 4)

1. Screw in for 1,5 - 2,0 cm the 4 screws M10x70 in dotation to the base.
2. Place than the base on the previously prepared base of cement (fig. 3).
3. The upper part of the base should be clean and perfectly horizontal.
4. Pass the plastic tubes of the cables through the central opening on the base and check again the stability of the base.
5. Unscrewing the 8 screws (10) take off the frontal (8) and the rear cover (9) of the column (fig. 4).
6. Place now the column structure on the base.
7. Fix now the column to the base with the 4 washers (5) and 4 nuts (4).
8. Fix the frontal covers (8) of both columns with 4 screws (10).
9. Now you can fix the chain to the apposite holes on both columns respecting the level X in the middle of the chain barrier indicated at the table (fig. 1).

MAINTANENCE PLAN (EVERY 6 MONTHS)

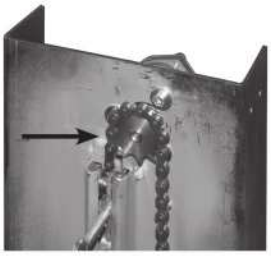
1. Cut the power supply off or disconnect the batteries if present. Clean and grease the guide and the pignons internally.
2. See if there are weared parts and replace these if neccessary.
3. Grease the internal transmitting chain (fig. 5).
4. Check the fixation nuts (fig. 6).
5. Control the electrical connections.
6. Supply the power again.
7. Check out the correct functioning of the obstacle recognition (encoder system).
8. Check out the correct functioning of all and of the security commands.



Description:

1 - Column
2 - Gearmotor with encoder
3 - Control unit
4 - Autoblocking nut M10
5 - Washer 20x10
6 - Backing plate
7 - Screw M10x70
8 - Anterior cover
9 - Posterior cover
10 - Closing screw M5x10

4



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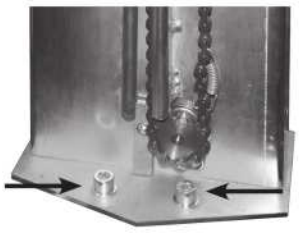

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MECHANICAL FUSE INSTALLATION

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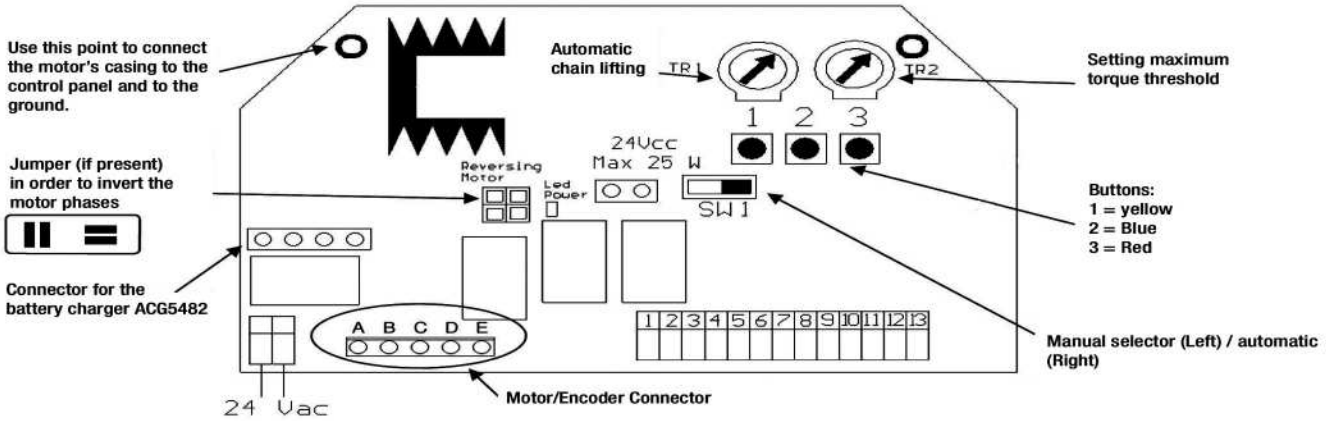
STOPPER CONTROL BOARD

1. INTRODUCTION

STOPPER is a control unit dedicated to the movement of the chain barrier with 24Vdc motor. The coexistance of various types of safeties such as the control of the absorbed power by the motor and the velocity of the motor allows a rapid intervention of the anti - squeezing security (sense).
Through the encoder present in the motor it is possible to control the exact position of the chain and to use it without mechanical limit switches.

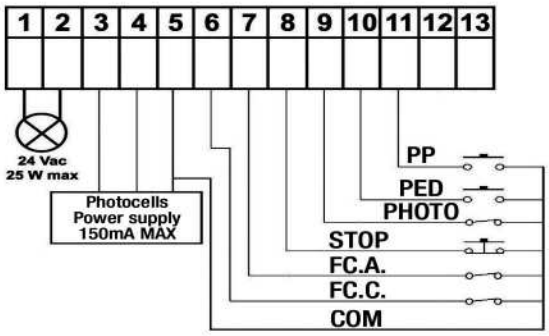
The control unit has inputs for mechanical limit switches, for the step by step button, for the pedestrian opening, for the safety photocells and the output for flashing light 24 Vac.
The unit also allows the regulation by trimmer both the automatic chain lifting and the motor force.
Action can control motors at 24 - 30 Vcc with a maximum consumption of 7A.

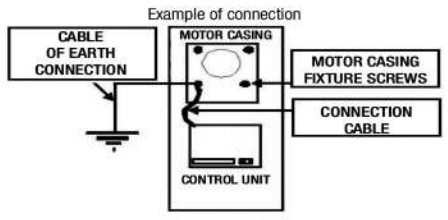
2. CONFIGURATION

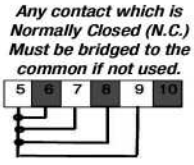


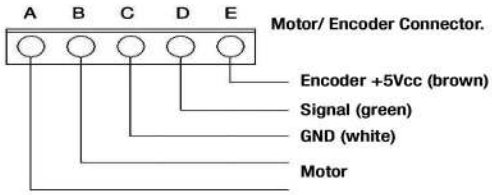
3. ELECTRICAL CONNECTIONS

Terminal	Function	Setting
1-2	Flashing signal output	Out: 24 Vac 25W MAX
3	Positive power supply TX & RX photocell	Out: +24Vcc **150mA MAX**
4	Negative power supply TX photocell	Out: GND TX
5	Negative power supply RX photocell and common button and safety	Out: GND RX Common
6	STOP of the chain raising	Normally closed (NC)
7	STOP of the chain lowering	Normally closed (NC)
8	STOP button input	Normally closed (NC)
9	RX photocell contact input	Normally closed (NC)
10	Pedestrian button input	Normally open (NO)
11	Step by step button input	Normally open (NO)
12	Not to use	
13	Not to use	









IMPORTANT: to obtain a correct working of the accessories (photo devices in particular) connected to the control box, it is very important that the entire system (motor+ control box) has a single mass reference system.

You must therefore connect a small cable between the motor casing and the control box at the point shown in the figure. If there is a good ground connection it is advisable to connect it to the system.

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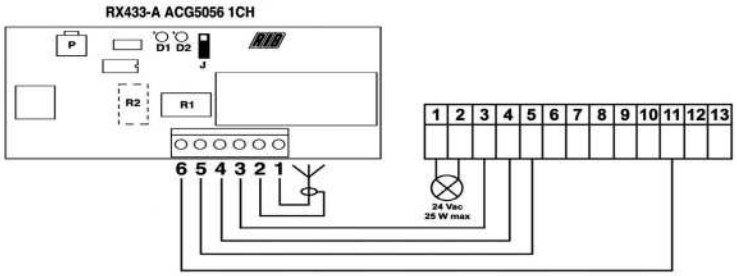
3.1 OPTIONAL RADIORECEIVER CONNECTIONS



Please refer to the instructions of RX433-A 1CH - RX433-A 2CH.
After the radio receiver has been connected, it can be glued, thanks to its bi-adhesive to the control board plastic top box, preferable from to the interior side. If you do not install a dedicated aerial, is suggest connecting a wire, 17cm long, to the first pin of the radio receiver terminal block.

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4. SETTINGS

This chapter contains important informations for a secure and correct installation.
Follow exactly all the instructions because a wrong installation can cause serious damages to the automation.

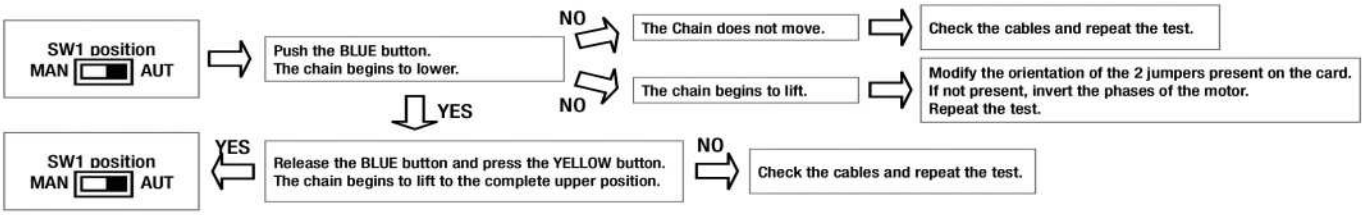
4.1 PRELIMINARY CHECKS

Before powering up the control panel, check the wirings.
In particular check that there are no damaged wires, short-circuits between wires and that all the accessories are connected to the terminal board in the points indicated in the diagram on the previous page.
Once the power supply is on check that:

1. The POWER LED is constantly on.
2. The radio module is inserted and working.
3. The motor and the encoder connections are correct by following the procedure described below.

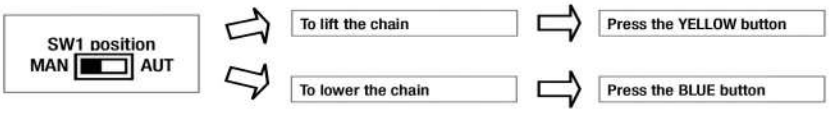
This procedure allows us to check the rotation sense of the motors, any possible blockages during the movement of the chain.
It is important to carry out this check in order to locate any wiring errors or anything else that can jeopardize.

N.B.: During this handling the photocells, the radio and the buttons are NOT active.



4.2 MANUAL MOVING

This procedure must be carried out ONLY by the installer and ONLY during the setting up of the system.
The movement can be effectuated in particular situations in which it is not possible to move the chain to the lifted position in automatic mode.



WARNING: the reactivation of the automatic mode (AUT) implies the use of the reached position as totally lifted position.

WARNING: During the manually moving, the anti-squeezing safety is not active.

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4.3 SETTING THE CHAIN MOVEMENT

This procedure must be carried out ONLY by the installer and ONLY during the setting up of the system.
The movement can be effectuated in particular situations in which it is not possible to lift the chain in automatic mode.

A — SW1 POSITION MAN / AUT

- Press the BLUE button for a while. The flashing signal begins flashing slowly.
  - NO → Check if the chain is into the complete lifted position. Check if SW1 is in the AUTO position and repeat the test.
  - YES ↓
- Press the BLUE button. The chain begins to lower.
  - NO → Check the wiring of the motor. Repeat the test.
  - YES ↓
- When the chain reaches the desired lower position, re-press the BLUE button. The chain stops.
  - NO → Re-press the BLUE button.
  - YES ↓
- Press the step by step button (terminal blocks 5 and 11). The chain rises to the upper position.
  - YES ↓
- During the memorization of the course and for the successive 2 complete cycles of moving (lowering-raising) avoid interventions on the inputs of stops and photocells, avoid also the verify of the sense, because the central in these 2 first movings acquires the parameters for a correct functioning.
  - NO → If the chain inverts the movement, bring it back to the upper position with the SW1 in MAN position. Once the chain is lifted, move back the SW1 to AUT.
  - YES ↓
- Press the step by step button (terminal blocks 5 and 11). The chain begins to lower.
  - NO → If the chain inverts the movement, bring it back to the upper position with the SW1 in MAN position. Once the chain is lifted, move back the SW1 to AUT.
  - YES ↓
- The rising and lowering are stored. → To re-program the rising and lowering repeat this procedure

4.4 REGULATION OF THE ANTI-SQUEEZING SECURITY

This procedure must be carried out ONLY by the installer and ONLY during the setting up of the system.
The movement can be effectuated in particular situations in which it is not possible to move the chain to the lifted position in automatic mode.

SW1 POSITION MAN / AUT → Set the trimmer to a reasonable minimum (MAX / DISABLE, SENSE) → With the chain in movement, check the sensibility of the intervention of the antisqueezing security and check that there is a regular functioning of the chain. → Check that the functioning is regular and that the sensibility is setted in a correct way, increase lightly the trimmer to balance the frictions wich can vary with the time and the temperature.

If it is too low → Turn the trimmer in anti-clockwise sense to decrease the force of the motors. (DECREASE OF FORCE; MAX / DISABLE, SENSE)

If it is too high → It is possible to turn the trimmer in clockwise sense to increase the force of the motors. (INCREASE OF FORCE; MAX / DISABLE, SENSE)

Repeat the force measurement

WARNING: With the trimmer in disabled position (flashing light turned on), the anti-squeezing security is excluded.

4.5 REGULATION OF THE AUTOMATIC RE-CLOSURE TIME

This procedure must be carried out ONLY by the installer and ONLY during the setting up of the system.
The movement can be effectuated in particular situations in which it is not possible to move the chain to the lifted position in automatic mode.

SW1 POSITION MAN / AUT → With the chain completely raise give a relay command and wait for complete opening.

- The time is too brief → Turn the A. RECL. TIME trimmer in clockwise sense. In this way, the automatic re-closure time is increased. → INCREASE OF TIME (MAX, A. RECL. TIME)
- The time is too long → Turn the A. RECL. TIME trimmer anticlockwise sense. In this way the automatic re-closure time is reduced. → DECREASE OF TIME (MAX, A. RECL. TIME)

Disabled Automatic Re-closure → Turn the A. RECL. TIME trimmer completely in clockwise sense. In this way you can disable automatic re-closure. (MAX, A. RECL. TIME) → DISABLED AUTOMATIC RE-CLOSURE

By turning the A. RECL. TIME trimmer completely in anticlockwise sense in band 1. The re-closure is controlled by the intervention of the photocells (after a few seconds from the photocell contact release, the chain rises).

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5. ADVANCED FUNCTIONS

This procedure must be carried out ONLY by an installer and ONLY during setting up of the system.
For correct setting, before carrying out alterations, bring the chain to the completely closed position (up) (see paragraph 4.2).

5.1 RESET

In case if it is necessary to reset the control unit proceed as follows (total erasing of the memory and deactivation of pre-blinking, photocell test and multi-user function):

1. Remove power supply from the system.
2. Set the selector SW1 on AUT (automatic).
3. Press the red button.
4. Keep it pressed while reconnecting the power supply.
5. Keep it pressed until the flashing signal lights up for the 3rd time.
6. Release the button and wait until the flashing light turns off. The reset is done

6. ENABLING AND DESABLING THE PRE-FLASHING, PHOTOCELL TEST AND THE MULTI-USER FUNCTION

To modify the status of any of these functions it is necessary to enable the setting mode. in the phase of learning the control unit automatically goes through all possible functions in which it is possible to intervene.
The led of the flashing light and the POWER led on the control board indicate that the selected function each time with a variable number of flashings.
The passage from a function to another one is executed automatically (it is enough to maintain always pressed the red button).
The control unit starts selecting the first function (signaled by 1 flashing), successively, keeping pressed the red button you pass at the second function (signaled by 2 flashings) and so on. To enable the setting / learning mode proceed as follows:

1. Raise the chain to its upper position (the SW1 switch ha sto be turned to the AUT position).
2. Press and keep pressed the red button.
3. After 4 - 5 seconds the led of the flashing - light executes a series of 8 flashings (notifying the next entry to the learning mode). Once the series of flashings end the control unit is in the learning mode. Do not release the red button yet.
4. Once individualized (through the number of flashings of the flashing-light led) the function that you want to modify, release the red button. In this way the function is selected. Once selected the function, the control unit puts in evidence the setting by flashing with a slow frequence (1 flashing/second) or with a rapid frequence (2 flashings / second) as pointed out on the next table.
5. Press now the button (see table) correspondant to the new status you wish set for the selected function. The frequency of flashing will vary according to the chosen mode.

At this point it is possible to modify further functions or, if you have finished, go out from the setting phase.

In case you want to modify other functions, press and keep pressed the red button.
After few seconds, the control unit will start again to select in sequence the several functions.
Instead if you want to exit from the learning mode, it is sufficient to bring the lever of the selector Sw1 in manual position, wait 1-2 sec and successively report it in automatic position.

6.1 PRE-FLASHING

The chain movement is always signalized by a pre-blinking, advising the user that the chain is next to move.

6.2 MULTI-USER FUNCTION

During the opening phase of the chain, every other command is ignored.
Once opened the chain (completely down, it is possible to close it using the step-by-step command or using the automatic re-closure.
During the closing phase, a step-by-step command blocks and inverts the movement.

6.3 PHOTOCELL TEST

Connect just one pair of photocells (max 150mA)
Every time the motor is switched on, the control unit automatically controls if the photocells are functioning properly.
This operation increases the security system.
If a photocell is damaged (for instance output relay stuck) or in case of undesired photocell input short circuit.
This test is executed immediately after that the control unit has received an order of "moving", but before power is applied to the motor.
In this way, the control unit gets out of the learning mode and prepares itself for the normal functioning.

No. of flashes	Selected function	Flash	Yellow button	Blue button
1	Pre-flashing	Slow = disabled	activation	deactivation
other 2	Photocell Test	Fast = disabled	activation	deactivation
other 3	Multi-user setting	Slow= disabled	activation	deactivation
other 4	Reserved			
other 5	Reserved			
other 6	Reserved			

7. PROBLEMS AND THEIR SOLUTIONS

Type of problem	Probable cause	Solution
Once a lift command is pressed, the chain does not move.	Lack of electrical power supply	Check the presence of the electrical voltage and all the connections to the electrical network
	Burned fuse	Replace the fuse with a similar one
Once a lift command is pressed, the chain rises for brief time and then stops.	Incorrect encoder connection	Check the connections of the encoder's wires
Once a lower command is pressed, the chain rises.	Jumper direction motor inverted	Invert the Jumpers.
The programming procedure cannot be activated.	The chain is not completely lifted.	Lift the chain with the manual procedure. If the chain is already lifted, turn SW1 to MAN, wait 1 second, turn SW1 to AUT. Try again.
The control panel is powered but the chain does not move.	A normally closed input is not active	Check the photocell, stop and limit switch input. If not used they must be bridged to the common.

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OPTIONALS - For the connections and the technical data of the fixtures follow the relevant handbooks.

STEEL CHAIN

Ø 6 mm red and white. code ACG5480

CHAIN PROTECTION RAMP

to fit at floor level. L = 2 m code ACG5481

BATTERY

1,2Ah 12V code ACG9511

BATTERIES CHARGER STOPPER

code ACG5482

RADIO TRANSMITTER SUN

SUN 2CH	code ACG6052	SUN 4CH	code ACG6054
SUN CLONE 2CH	code ACG6056	SUN CLONE 4CH	code ACG6058

CODE LEARNIG SYSTEM RADIORECEIVERS

S433 1CH	1-channel with terminal Block	code ACG5082
S433 2CH	2-channels with terminal Block	code ACG5084
S433 4CH	4-channels with terminal Block	code ACG5086

METALLIC MASS DETECTOR

to open with vehicles

1 channel - 230 Vac	code ACG9060
1 channel - 12÷24 Vac/dc	code ACG9063
2 channels - 12÷24 Vac/dc	code ACG9064

LOOP PRE-ASSEMBLED

6 m - perimeter 2 x 1 + 15 m of cable	code ACG9067
10 m - perimeter 3 x 2 + 15 m of cable	code ACG9068

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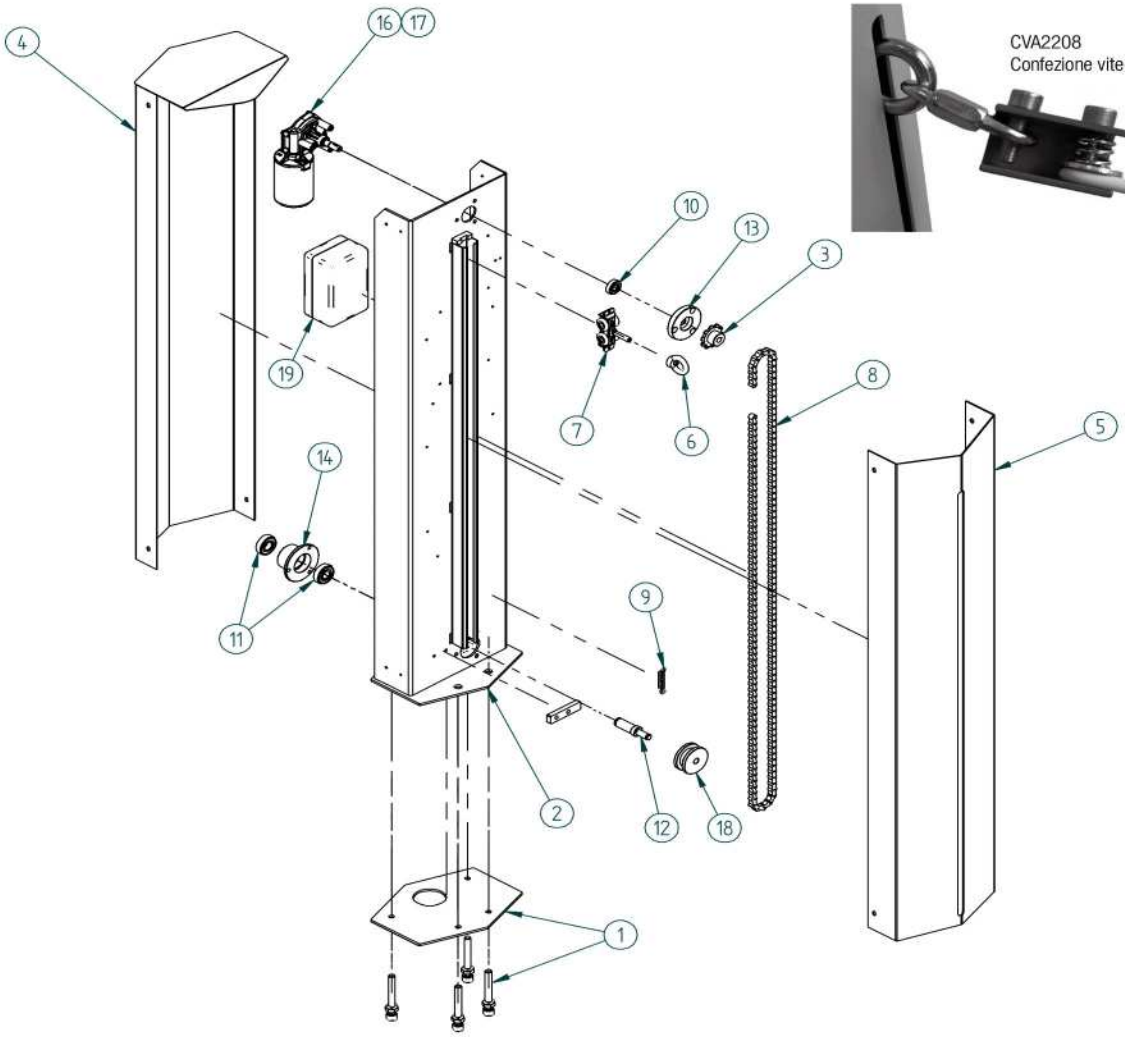

CVA2208
Confezione vite-molla-rondella

Pos.	Codice	Descrizione	Q.tà Colonna Master	Q.tà Colonna Slave					
1	CVA2202	PIASTRA DI FONDAZIONE	1	1	10	CVA2283	CUSCINETTO SU ALBERO MOT (ISB 6200 2RS)	1	1
2	CVA2280	TELAIO LAMIERA ZINCATA	1	1	11	CVA2284	CUSCINETTO ALBERO RINVIO (ISB 6202 2RS)	2	2
3	CVA2279	PIGNONE 10 DENTI	2	2	12	CVA2296	ALBERINO DI RINVIO PIGNONE	1	1
4	CVA2304	CARTER POSTERIORE GRIGIO RAL7040	1	1	13	CVA2297	FLANGIA ALLUMINIO SUPPORTO MOTORE	1	1
5	CVA2303	CARTER ANTERIORE GRIGIO RL7040	1	1	14	CVA2298	FLANGIA ALLUMINIO SUPPORTO RINVIO	1	1
6	CVA2251	GOLFARO	1	1	16	CVA2254	MOTORIDUTTORE 60KG DX CON ENC	1	0
7	CVA2252	CARRELLO TRAINO+ STAFFA INOX	1	1	17	CVA2281	MOTORIDUTTORE 60KG DX NO ENC	0	1
8	CVA2253	CATENA 1/2" + GIUNTI	1	1	18	CVA2306	RUOTA RINVIO CATENA IN NYLON	1	1
9	CVA2282	MOLLA TENDICATENA	1	1	19	BC07076	QUADRO x IN BOX senza M3	1	0

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