

**319W86EN**

**CONTROL PANEL  
FOR 230V GEARMOTORS**



**Installation manual**

**ZA3P**

**IMPORTANT SAFETY INSTRUCTIONS FOR INSTALLING**  
**WARNING: IMPROPER INSTALLING MAY RESULT IN SERIOUS DAMAGE. FOLLOW ALL INSTALLATION INSTRUCTIONS**  
**THIS MANUAL IS EXCLUSIVELY INTENDED FOR PROFESSIONAL FITTERS OR SKILLED TECHNICIANS**

## LEGEND

-  This symbol shows which parts to read carefully.
-  This symbol shows which parts describe safety issues
-  This symbol shows which parts to tell users about.

## REFERENCE REGULATIONS

Came Cancelli Automatici S.p.A. is certified for the: ISO 9001 quality and ISO 14001 environmental management systems. This product complies with the current regulations mentioned in the declaration of conformity.

## DESCRIPTION

Multi-feature control panel for swing gates, with manageable limit-switches and slow-down speed adjusting.

The control devices and accessories run on 24 V.

 The overall draw of the accessories must not exceed 20 W.

All connections are quick-fuse protected. See table.

The control board provides and controls the following functions:

- automatic closing after and opening command;
- pre-flashing of the movement indicator;
- obstruction detection when gate is stopped at any point;
- torque adjusting of the connected operator;
- opening ram-jolt;
- fixed ten second slow-down with adjustable speed;
- manageable limit-switches:

The definable control modes are:

- opening/closign;
- opening/closing in maintained action;

- partial opening;
- total stop.

The photocells, after detecting an obstruction, may trigger:

- a reopening if the gate is closing;
- reclosing or partial stop if gate is opening;
- partial stop if gate is opening.

Dedicated trimmers adjust:

- the automatic closing time;
- gearmotor M2 delayed closign;
- the working time.

You can also connect:

- gate open warning lights; - cycle lights;
- electrolock.

### Intended use

The ZA3P control panel is designed for controlling ATI, FERNI, KRONO, FAST and FROG 230 V swing-gate operators.

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

### Limits to use

The overall power of the connected motors must never exceed 600 W.

### Technical data

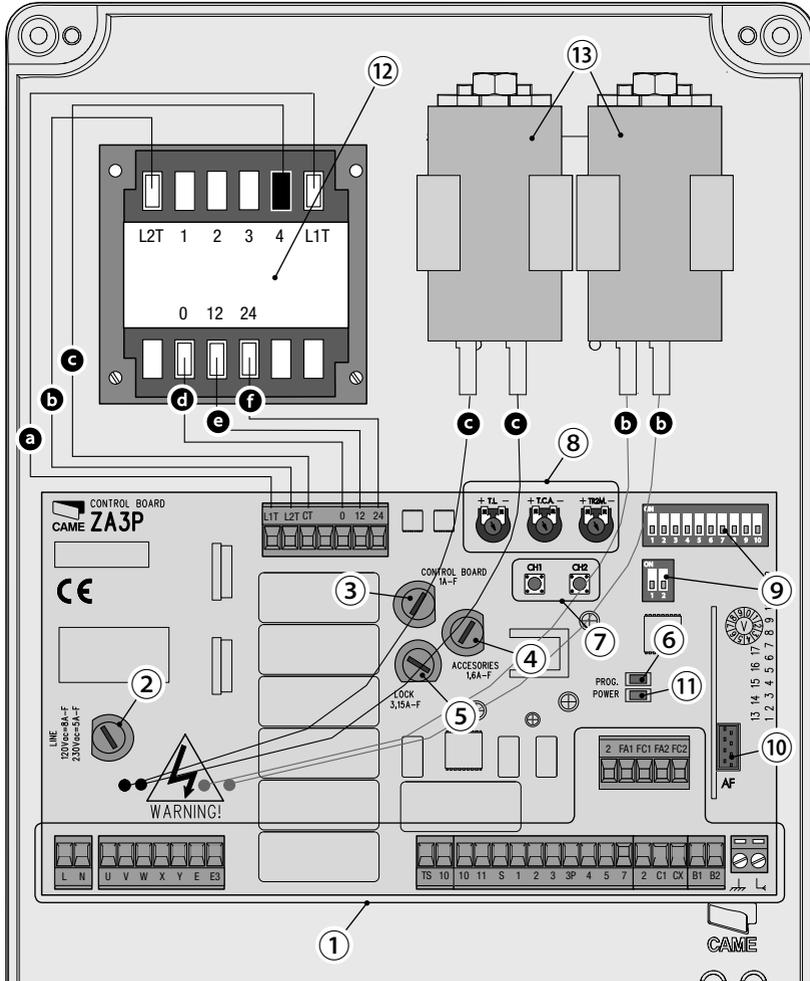
Type	ZA3P
Protection rating (IP)	54
Power supply (V - 50/60 Hz)	230 AC
Power draw when idle (mA)	60
Maximum power (W)	600
Casing material	ABS
Operating temperature (°C)	-20 ÷ +55
Insulation class	

### Fuse table

To protect	Fuse at
Control board (LINE)	5 A-F
Command and control devices (CONTROL BOARD)	1 A-F
Accessories (ACCESSORIES)	1.6 A-F
Electrolock (LOCK)	3.15 A-F

## Description of parts

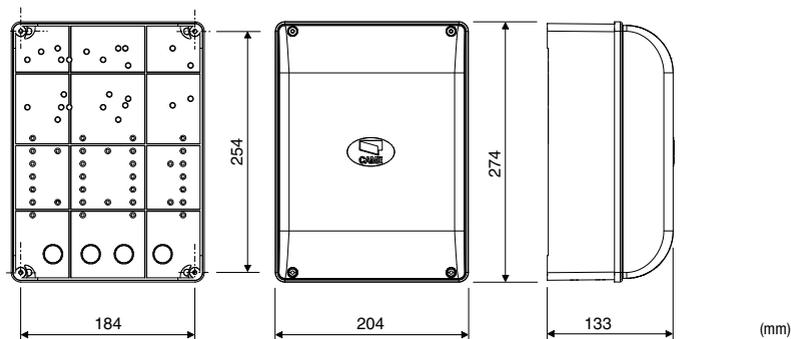
1. Control board
2. fuse connection terminals
3. Control device fuses
4. Accessories fuse
5. Electrolock fuse
6. Programming LED
7. Radio code memorizing buttons
8. Time setting trimmer
9. Functions selectors
10. AF radio frequency card plug
11. 24 V warning LED
12. Transformer
13. Condensers\*



\***13** Contained in the 230 V FROG gearmotor box. Connect them to the black cables (motor M1) and red ones (motor M2), which are set up on the control board; if pairing ATI, FAST, FERNI and KRONO gearmotors, these will stay unused (the condensers are connected inside).

Transformer and condenser cable colors: **a** white; **b** red; **c** black; **d** orange; **e** purple; **f** light blue.

## Dimensions



## GENERAL INSTRUCTIONS FOR INSTALLING

- ⚠ Only skilled, qualified staff must install this product.
- ⚠ Warning! Before working on the control panel, cut off the main current supply and, if present, remove any batteries.

### Preliminary checks

- ⚠ Before beginning the installation, do the following:

- make sure you have set up a suitable dual pole cut off device along the power supply that is compliant with the installation rules. It should completely cut off the power supply according to category III surcharge conditions (that is, with minimum contact openings of 3 mm); ⚡ make sure that any connections inside the container (ones that ensure continuity to the protection circuit) are fitted with additional insulation with respect to those of other electrical parts inside; set up suitable tubes and conduits for the electric cables to pass through, making sure they are protected from any mechanical damage

### Cable types and minimum thicknesses

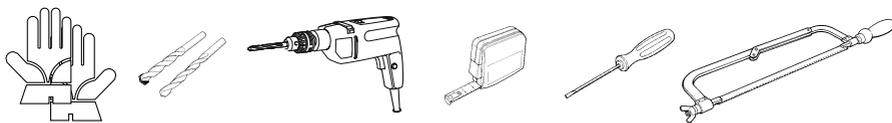
Connection	Cable type	Cable length 1 < 10 m	Cable length 10 < 20 m	Cable length 20 < 30 m
Control panel power supply 230 V AC		3G x 1.5 mm <sup>2</sup>	3G x 2.5 mm <sup>2</sup>	3G x 4 mm <sup>2</sup>
Motor/encoder power supply 24 V DC		3 x 1 mm <sup>2</sup>	3 x 1.5 mm <sup>2</sup>	3 x 2.5 mm <sup>2</sup>
Flashing light	FROR CEI 20-22	2 x 0.5 mm <sup>2</sup>	/	/
Photocell transmitters	CEI EN 50267-2-1	2 x 0.5 mm <sup>2</sup>	2 x 0.5 mm <sup>2</sup>	2 x 0.5 mm <sup>2</sup>
Photocell receivers		4 x 0.5 mm <sup>2</sup>	4 x 0.5 mm <sup>2</sup>	4 x 0.5 mm <sup>2</sup>
Command and safety device		2 x 0.5 mm <sup>2</sup>	2 x 0.5 mm <sup>2</sup>	2 x 0.5 mm <sup>2</sup>
Antenna	RG58		max 10 m	

📖 If cable lengths differ from those specified in the table, establish the cable sections depending on the actual power draw of the connected devices and according to the provisions of regulation CEI EN 60204-1.

For multiple, sequential loads along the same line, the dimensions on the table need to be recalculated according to the actual power draw and distances. If connecting products that are not contemplated in this manual, see the literature accompanying said products

## Tools and materials

Make sure you have all the tools and materials you will need for installing in total safety and in compliance with applicable regulations. The figure shows some of the equipment installers will need.



## INSTALLATION

### Fastening the control panel

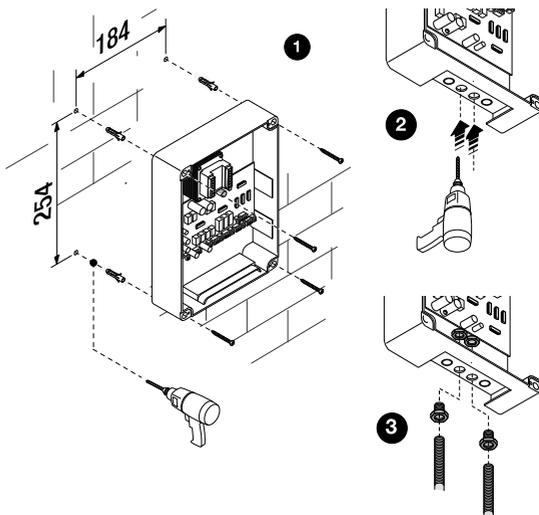
**1** Fasten the control panel base in a protected area; use rounded cross head screws with maximum 6 mm diameter.

**2** Perforate the pre-drilled holes.

The holes have different diameters: 23, 29 and 37 mm.

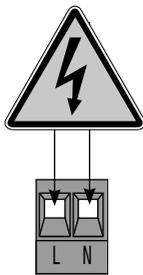
Be careful not to damage the control board inside the control panel.

**3** Enter the cable gland with the corrugated tubes for threading the electrical cables.

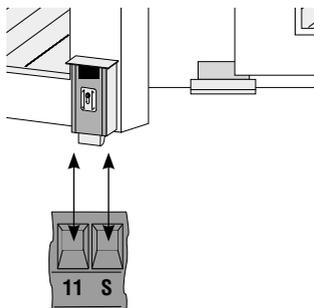


## ELECTRICAL CONNECTIONS AND PROGRAMMING

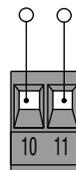
### Power supply



Control panel  
230V A.C. 50/60 Hz



Electrolock connection  
(12V-15W max.)



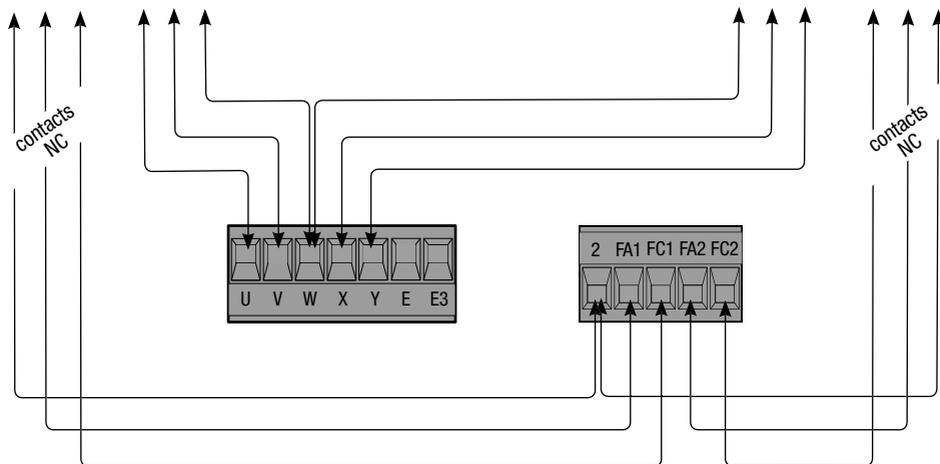
Terminals for connecting  
24 VAC accessories.

## Gearmotor

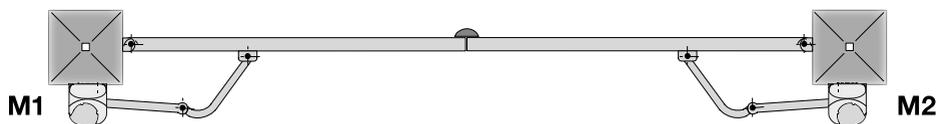
Delayed opening action  
garmotor (M1)



Delayed closing action  
garmotor (M2)

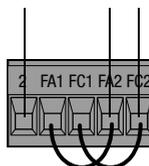


Same gearmotors standard set opening scheme.



With gates with only one leaf:

- connect the gearmotor to W X Y (M2) regardless of the side it is fitted on (for FROG, if necessary, invert connections X and Y);
- connect the limit-switches to 2-FA2-FC2 and short-circuit FA1-FA2/FC1-FC2.

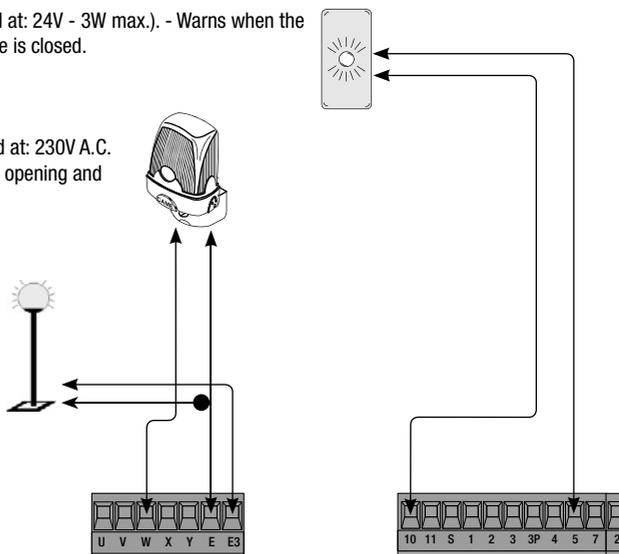


## Warning and lighting devices

**Gate open warning light** (Contact rated at: 24V - 3W max.). - Warns when the gate is open, and turns off when the gate is closed.

**Movement flashing light** (Contact rated at: 230V A.C. - 25W max.). - Flashes when the gate is opening and closing.

**Courtesy light** (230V-60W). -It stays on for a fixed time of 5 minutes from the moment in which the gate-leaves start their maneuver.



## Command and control devices

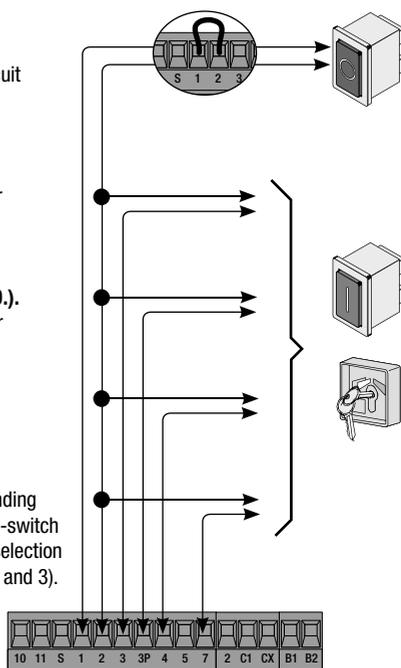
**Stop button** (contact N.C.). - For commanding the gate stop while excluding the automatic closing cycle. To resume movement, press the command button or the transmitter button. If unused, short-circuit terminals 1-2.

**Opening key-switch selector and/or button (contact N.O.).** - For commanding gate opening.

**Partial opening key-switch selector and/or button (contact N.O.).** - For commanding the partial opening of a gate-leaf (2nd motor) for pedestrian passage.

**Closing key-switch selector and/or button (contact N.O.).** - For commanding gate closing.

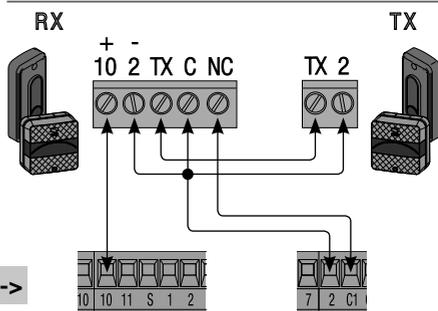
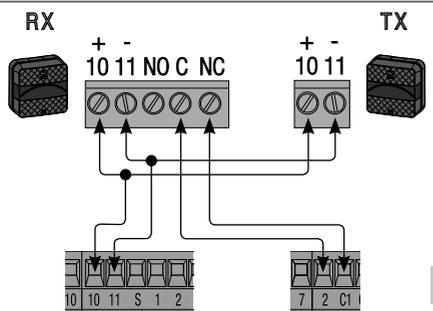
**Key-switch selector and/or button (contact N.O.).** - For commanding gate opening and closing. By pressing the button or turning the key-switch selector, the gate inverts its movement or stops depending on the selection made on the DIP-switches (see functions selecting, DIP-switches 2 and 3).



Safety devices

Delta

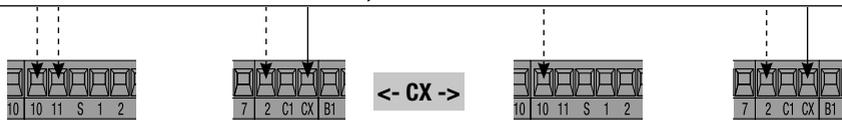
Dir/DeltaS



<- C1 ->

Reopening during **closing connection (contact NC)**. With safety devices such as photocells, sensitive safety-edges and other EN 12978 regulation compliant devices. When closing, the contact triggers the inversion of movement until opening is complete.

If unused, short-circuit 2-C1.



<- CX ->

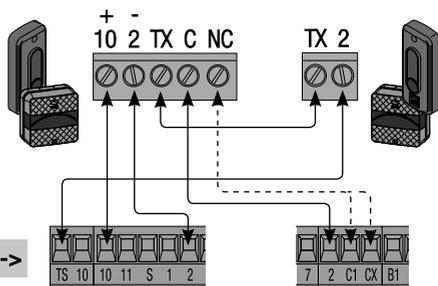
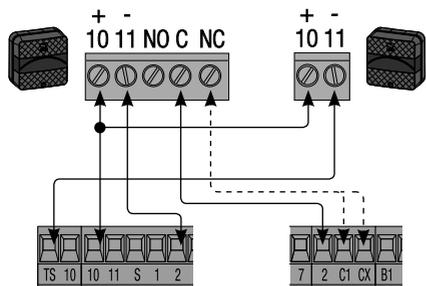
with DIP-switch 8 OFF - DIP-switch 2 OFF  
(Selector **B**)

with DIP-switch 8 OFF - DIP-switch 2 ON  
(Selector **B**)

Connection for **reopening during closing (contact NC)**. - With safety devices such as photocells, sensitive safety-edges and other EN 12978 regulation compliant devices. When opening, the contact triggers the inversion of movement until closing is completed.

Partial stop **connection (contact NC)**. - With safety devices such as photocells, sensitive safety-edges and other EN 12978 regulation compliant devices. Stops movement and then triggers automatic closing.

If unused, disable input CX with DIP-switch 8 set to ON.



<- TS ->

with DIP-switch 10 ON

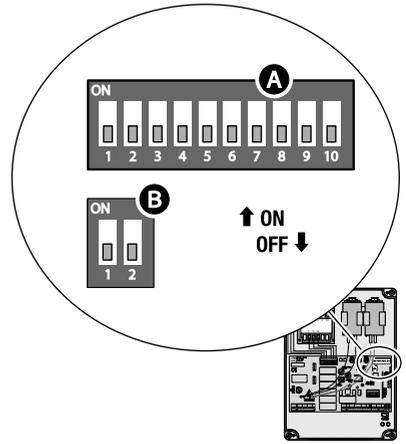
**Safety test function connection** - With each opening and closing command, the board checks the efficiency of the photocells. Any malfunction of the photocells is warned by the flashing LED PROG on the control board, which cancels any command from the radio transmitter or button.

**IMPORTANT:** When activating the safety test feature, at least one pair of photocells must be connected in "reopening during closing" (C1).

**functions selection**

**Selector A**

- 1 ON Automatic closing activated (1 OFF - deactivated);
- 2 ON "Open-stop-close-stop" with button (2-7) and radio-control (AF card fitted) activated;
- 2 OFF "Open-close" with button (2-7) and radio-control (AF card fitted) activated; 3 ON "Open only" with radio-control (AF card fitted) activated (3 OFF-deactivated);
- 4 ON Pre-flashing while opening and closing activated (4 OFF-deactivated)
- 5 ON Obstruction detection activated (5 OFF-deactivated);
- 6 OFF "Maintained action" (excludes functioning of the radio control) deactivated (6 ON-activated);
- 7 ON Ram-jolt activated; with each opening command, the gate-leaves at final closing point press for one second, thus facilitating the releasing of the electrolock which is connected to terminals 11-S. It is active only if the gate-leaves are closed and the end of the working time, or at the 1st maneuver after powering up the system (7 OFF-deactivated);
- 8 OFF Terminal CX activated (8 ON-deactivated);
- 9 OFF Ten-second slow-down deactivated (9 OFF-activated);
- 10 ON Photocells test activated (10 OFF deactivated).

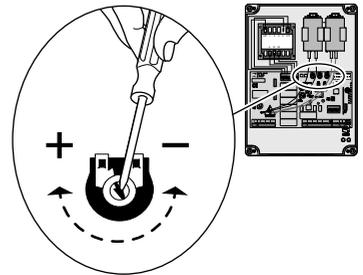


**Selector B**

- 1 ON Limit switches enabled (1 OFF - disabled);
- 2 OFF CX with reclosing during opening feature.
- 2 ON CX with partial stop feature.

**Trimmer adjusting**

- + T.L. - Adjusting working time from a minimum of 10 seconds to a maximum of 120 seconds.
- + I.C.A. - Adjusting the automatic closing time from a minimum of 1 second, to a maximum of 120 seconds.
- + TR2M. - Adjusting delayed closing of 2nd motor (min. 0", max. 15") and simultaneously partial opening (min. 0", max. 30").



**Adjusting slow-down speed**

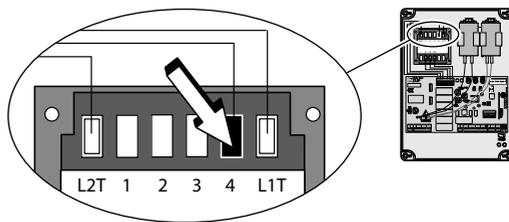
To adjust the slow-down speed (operation to be done with gate stopped):

- set DIP-switch 6 to ON;
- press CH1, the red LED PROG will show the set slow-down speed (see table);
- by pressing CH1 again it shifts to the next speed;
- confirm the choice by pressing CH2;
- reset DIP-switch 6 to OFF.

Flashing in quick succession	Slow-down speed 1
minimum	2
medium	3
maximum	

## Adjusting the motor torque

To vary the motor torque, move the show faston to one of the four positions:  
1 min., 4 max..

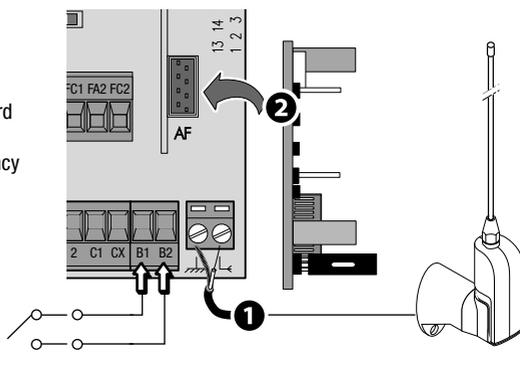


## ACTIVATING THE RADIO CONTROL

### Antenna and AF radiofrequency card

- 1 Connect the antenna's RG58 cable to the corresponding terminals.
- 2 Fit the radio frequency card into the control board AFTER CUTTING OFF THE MAIN POWER SUPPLY  
N.B.: The control board recognizes the radiofrequency card only when it is powered up.

Possible connection of a second operator, that can be activated by the second channel of the radio circuit (contact NO). Contact rated for: 5A-24 V DC



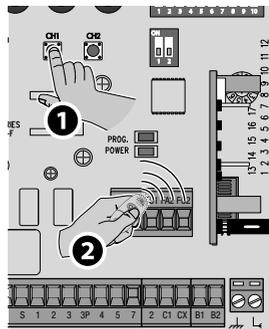
### Memorization (max. 25 different transmitters)

**CH1** = Channel for direct commands to a functions of the gearmotor's control board ("open only / " open-close-invert" command or "open-stop-close-stop", depending on the selection made on DIP-switches 2 and 3).

**CH2** = Channel for direct command to an accessory device connected to B1-B2.

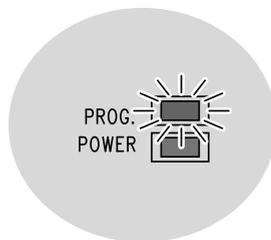
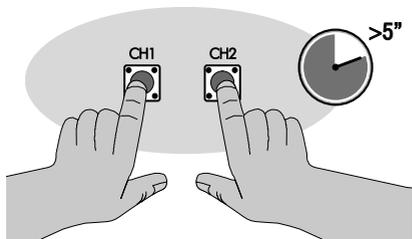
- 1 Keep button CH1 pressed on the control board (the warning LED will flash), with a transmitter button send the code 2, the LED will stay on to tell you that memorization has been successful.

Perform the same procedure with button CH2, **associating** it to another button on the transmitter.



## Totally cancelling the memory

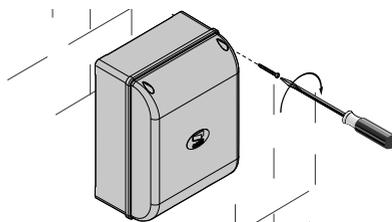
Simultaneously keep pressed buttons **CH1** and **CH2** for over five seconds; when the LED stays lit, all **PROG** of the radio control will be cancelled.



## FINAL OPERATIONS

### Fastening the cover

Once the electrical connections and set up are done, fit the cover and fasten it using the supplied screws.



## DISMANTLING AND DISPOSAL

 **CAME CANCELLI AUTOMATICI S.p.A.** employs an Environmental Management System at its premises. This system is certified and compliant with the UNI EN ISO 14001 regulation standard to ensure that the environment is respected and safeguarded.

Please continue protecting the environment. At CAME we consider it fundamental in our strategic market policies. Just follow these simple dismantling instructions:

 Before disposing, it is always advisable to check with the specific laws that apply in your area.

**DO NOT DISPOSE OF IN NATURE!**

 **DISPOSING OF THE PACKAGING** The packaging materials (cardboard, plastic, and so on) should be disposed of as solid urban waste, and simply separated from other waste for recycling.

 **DISMANTLING AND DISPOSAL** Our products are made with different materials. Most of these (aluminum, plastic, iron, electrical cables) are classified as solid urban waste. They can be recycled by separating them before dumping at authorized city dumps. Whereas other components (control boards, batteries, transmitters, and so on) may contain hazardous pollutants. These must therefore be disposed of by authorized, certified professional services.

## DECLARATION OF CONFORMITY

Declaration  CAME Cancelli Automatici S.p.A. declares that this product conforms to the essential, pertinent requirements provided by directives 2006/95/CE and 2014/30/UE. An original copy of the declaration of conformity is available on request.



**English** - Manual code: **319W86 v.2** 05/2015 © CAME cancelli automatici s.p.a.  
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