



CONTROL PANEL FOR EMEGA SERIES



ZE5 v.7



INSTALLATION MANUAL

“IMPORTANT SAFETY INSTRUCTIONS TO FOLLOW DURING INSTALLATION”
 WARNING - IMPROPER INSTALLATION MAY CAUSE SERIOUS DAMAGE. FOLLOW ALL INSTALLATION
 INSTRUCTIONS
 THIS MANUAL IS MEANT FOR PROFESSIONAL INSTALLERS OR QUALIFIED PERSONNEL ONLY.



1 Legend



THIS SYMBOL INDICATES SECTIONS TO BE READ WITH PARTICULAR CARE.



THIS SYMBOL INDICATES SECTIONS CONCERNING SAFETY.



THIS SYMBOL INDICATES NOTES TO COMMUNICATE TO USERS

2 Use Applications and Destination

2.1 Destination

The ZE5 electrical panel is designed to control EMEGA (E306-E456) automation units in the movement of garage-type doors with double or single motor.

2.2 Limits of Use

-Observe distances and cable diameters as indicated in the table in chapter 5.4

3 Standards followed

The following standards were complied with for this product: EN 12978, UNI EN 954-1, CEI EN 60335-1, and UNI EN 12453.

4 Device Description

4.1 Components

230V electric panel for EMEGA series automation systems; 50÷60 Hz frequency.
 Wholly designed and built by CAME Cancelli Automatici S.p.A.
 Guaranteed 24 months if not tampered with.

4.2 Technical Information

Electric Panel

Power supply: 230V, 50÷60 Hz.

Maximum power allowed: 400 W

Absorption at rest: 150 mA

Maximum power for 24V accessories: 20 W

Maximum power for 230V accessories: 120 W

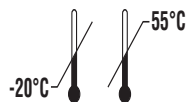
Degree of protection: IP54

Insulation type: II



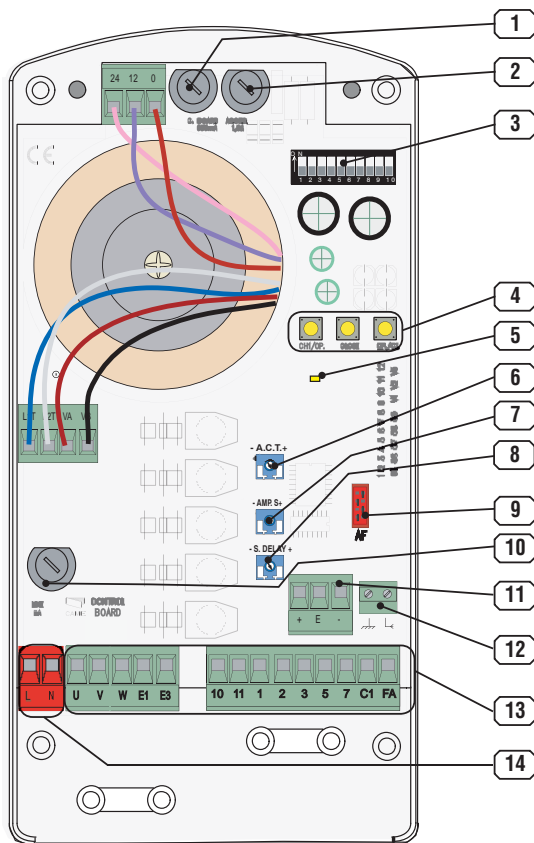
Material: ABS

Working temperature:



All the data and information contained herein is considered subject to change at any time and at our discretion.

4.3 Main Components



- 1 630 mA board fuse
- 2 1.6 A fuse for accessories
- 3 Dip-Switch for function selector
- 4 Keys for radio code memorisation and for end-stop programming
- 5 LED indicator
- 6 Trimmer for adjusting automatic closing times
- 7 Encoder sensitivity adjustment trimmer
- 8 Trimmer for adjusting operation times
- 9 Radiofrequency board coupling
- 10 5 A line fuse
- 11 Encoder connection terminal board
- 12 Aerial connection terminal board
- 13 Connection terminal board
- 14 Power feed terminal board

5 Installation

5.1 Equipment and materials

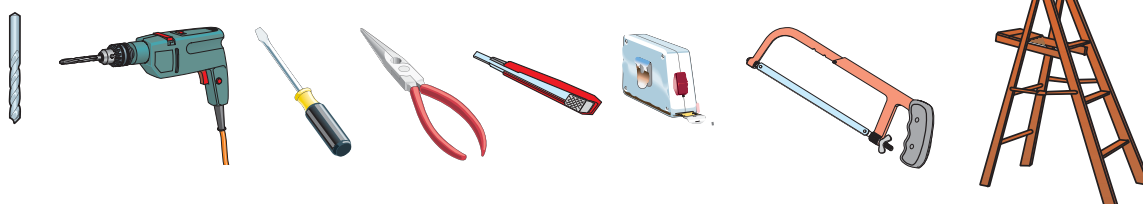


Before proceeding with the installation, it is necessary to:

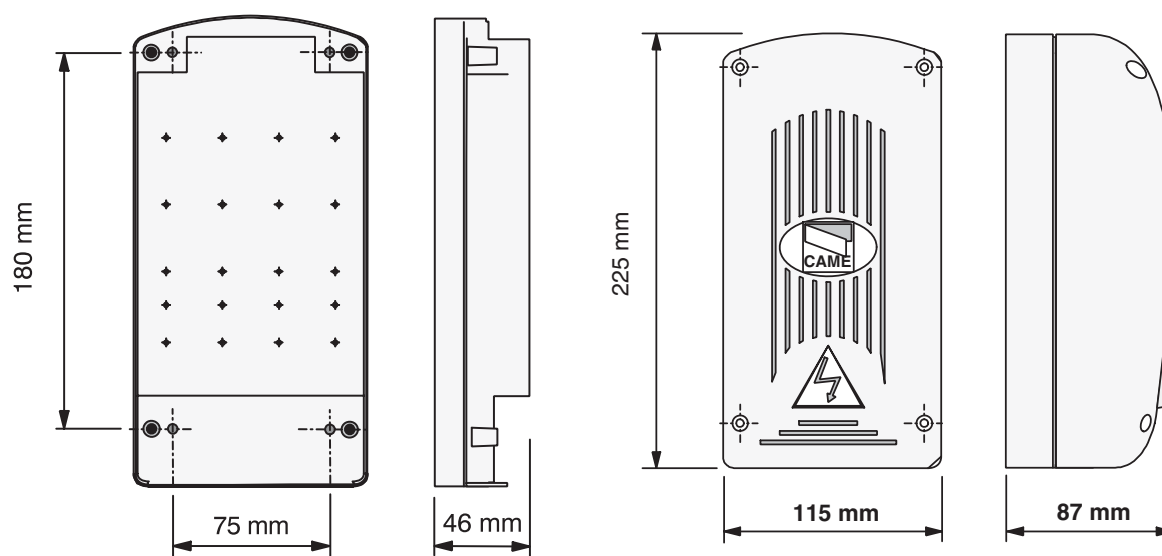
- Make sure the mains power is off.
- Check that the control panel is installed in an area protected from bumps and that the anchorage surface is solid, and that it is secured with suitable elements (screws, inserts, etc).
- Install suitable tubes and ducts for electric cable passage to guarantee protection against mechanical damage.
- ⚠ Connections inside the case made for protection circuit continuity are allowed as long as they include additional insulation with respect to other internal drive parts.

5.2 Attrezzi e materiali

Make sure all the necessary tools and materials are available to carry out the installation with the maximum safety, in compliance with regulations in force. Here are some examples:



5.3 Dimensions, axle bases and fastening holes



5.4 Minimum thicknesses and cables types

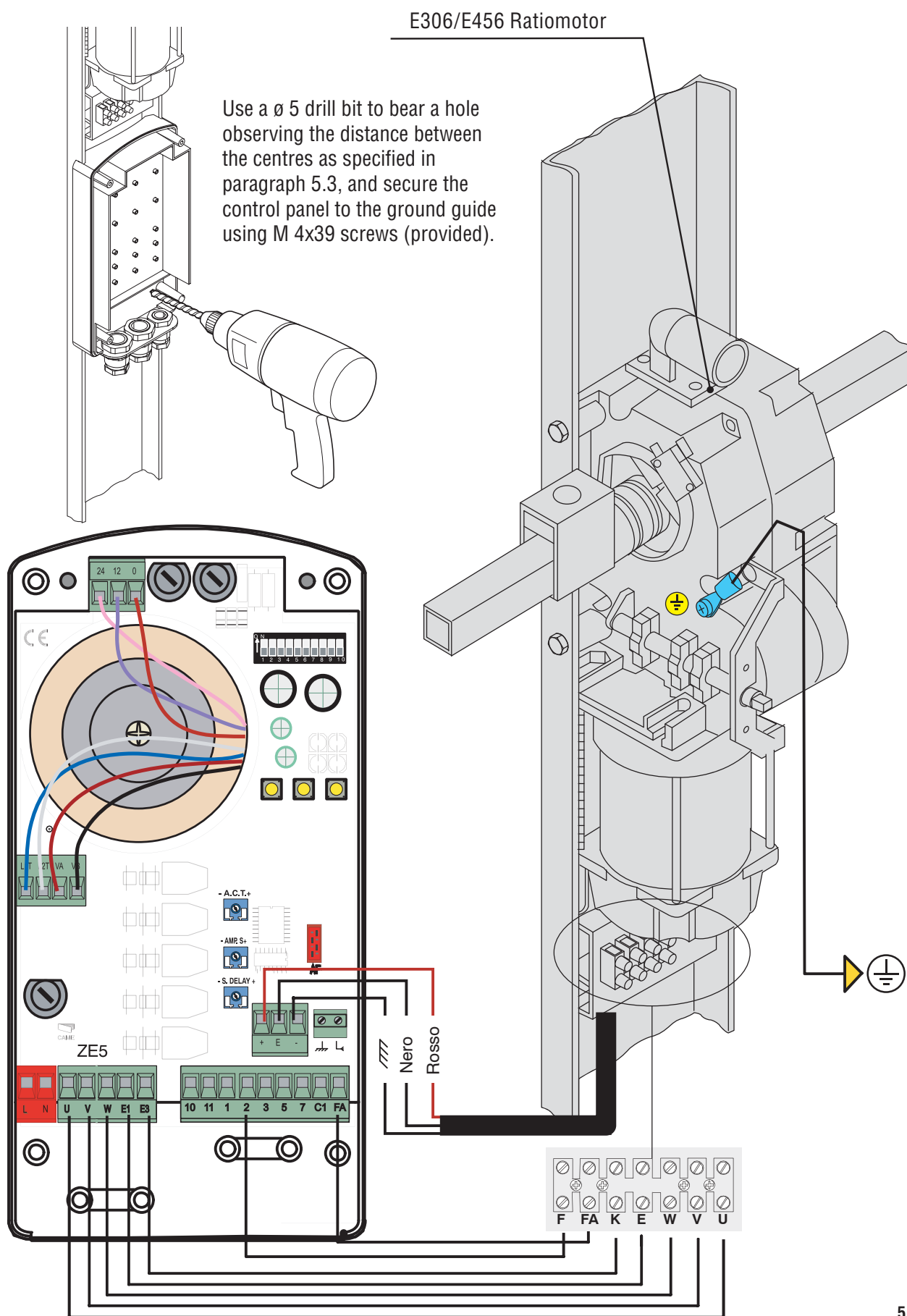
Connections	Cable Type	1<10 m Cable Length	10<20 m Cable Length	20<30 m Cable Length
230V 2F power supply	FROR CEI 20-22 CEI EN 50267-2-1	3G 1,5mm ²	3G 2,5mm ²	3G 4mm ²
230V 2F motors		4G 1mm ²	4G 1,5mm ²	4G 2,5mm ²
230V flashing lamp		2 x 0,5mm ²	2 x 1mm ²	2 x 1,5mm ²
230V cycle / courtesy lamps		3G 0,5mm ²	3G 1mm ²	3G 1,5mm ²
Power for 24V accessories		2 x 0,5mm ²	2 x 0,5mm ²	2 x 1mm ²
24V pilot lamp		2 x 0,5mm ²	2 x 0,5mm ²	2 x 1mm ²
24V "in movement" output		2 x 0,5mm ²	2 x 0,5mm ²	2 x 1mm ²
Safety contacts		2 x 0,5mm ²	2 x 0,5mm ²	2 x 0,5mm ²
N.O./N.C. command keys		2 x 0,5mm ²	2 x 0,5mm ²	2 x 0,5mm ²
End-stop		2 x 0,5mm ²	2 x 1mm ²	2 x 1,5mm ²
Aerial connection (max 10m)		RG58		
Encoder connection (max 30m)		Shielded cable 2402C 22AWG		

N.B. The evaluation of the section of cables with lengths other than the ones stated in the table should be considered according to the real absorption of the connected devices, in compliance with the prescriptions in CEI EN 60204-1 standard.

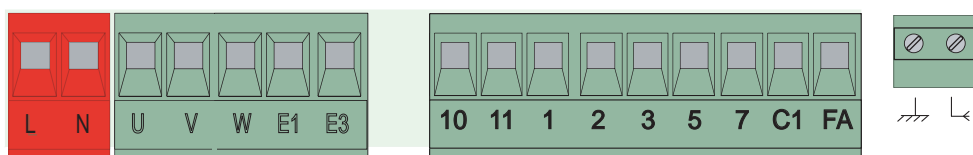
Table dimensioning should be recalculated according to real absorption and distances for connections requiring more than one charge (sequential) on the same line.

All the data and information contained herein is considered subject to change at any time and at our discretion.

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5.6 Connections



L — 230V (a.c.) power supply
N —

U — 230V (a.c.) max. 400 W single-phase motor
W —
V —

W — 230V (a.c.) output in movement (e.g. flashing lamp - max. 25W)
E1 —

E1 — 230V (a.c.) courtesy lamp output (max. 60W)
E3 —

10 — 24V (a.c.) (max. 20W) accessory power feed
11 —

10 — 24V-15W max. electric lock connection (set dip-switch 9 to OFF)
5 —

10 — (24V-3W max.) “open door” signalling pilot light (set dip-switch 9 to ON)
5 —

1 — Stop key (N.C.)
2 —

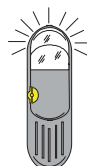
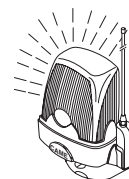
2 — Opening key (N.O.)
3 —

2 — Key for commands (N.O.) see selection on dip-switch 2 or closing key in the “sustained action” function (dip 6 to ON)
7 —

2 — (N.C.) Contact “opening during closing”
C1 —

2 — Opening end-stop connection
FA —

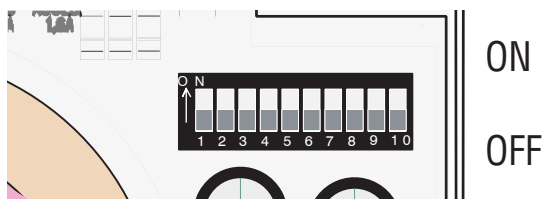
— Aerial connection
—



All the data and information contained herein is considered subject to change at any time and at our discretion.

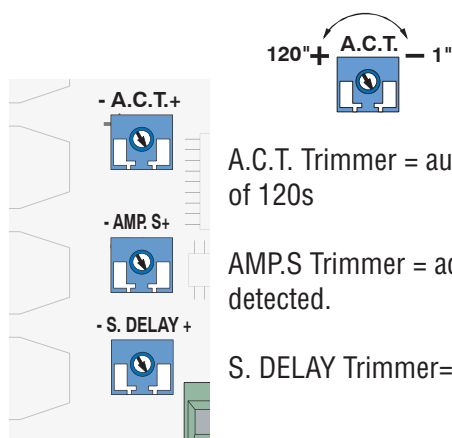
N.B. All the usually closed (N.C.) contacts and keys should be deactivated via dip-switch or short-circuited.

5.7 Dip-switch Functions



- 1 ON** Automatic closing activated;
- 2 ON** "Open-stop-close-stop" with key (2-7) and radio remote control (AF board inserted) activated;
- 2 OFF** "Open-close" with key (2-7) and radio remote control (AF board inserted) activated;
- 3 ON** "Opening only" with radio remote control (AF board inserted) activated;
- 4 ON** "Pre-flashing during the opening and closing phases activated; after receiving an opening or closing command, the flashing lamp connected on W-E1 flashes for 5 seconds prior to obeying the command.
- 5 ON** Obstacle detection activated; with the motor stopped (door closed, open or after a total stop command), it prevents movement of any sort if the safety devices (e.g. photoelectric cells) detect an obstacle;
- 6 ON** "Dead man" mode activated; the door functions by keeping the key pressed, key connected to (2-3) for opening and (2-7) for closing, without including the remote control function;
- 7 OFF** Reopening during closure activated; the safety device (2- C1) detects an obstacle during the door's closing phase and causes the door to invert movement until the door is completely open (7ON deactivated);
- 8 ON** Encoder programming activated; it enables the opening and closing end-stop calibration procedure;
- 9 ON** "Door Open" pilot light connected on terminals 10-5 activated; it signals the open position of the garage door, and switches off when the door is closed.
- 9 OFF** Electric lock connected to terminals 10-5 activated;
- 10 ON** motor closing thrust increase activated.
- 5-10 ON** Increased thrust during closing and surge function in operation.

5.8 Trimmer Adjustments



A.C.T. Trimmer = automatic closing time adjustment from a minimum of to a maximum of 120s

AMP.S Trimmer = adjustment of door sensitivity during movement when obstacles are detected.

S. DELAY Trimmer= adjusting operating time

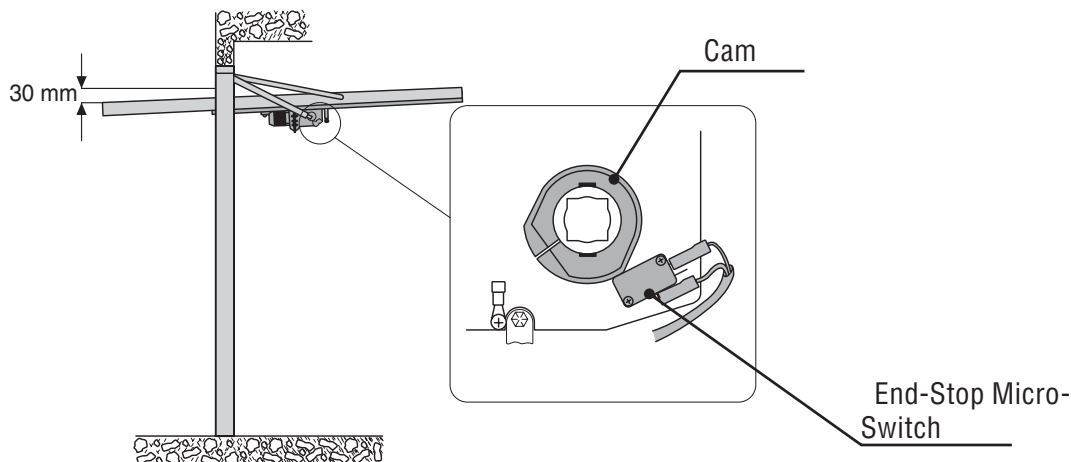
5.9 Encoder Programming



IMPORTANT: READ INSTRUCTIONS CAREFULLY BEFORE PROCEEDING WITH PROGRAMMING.

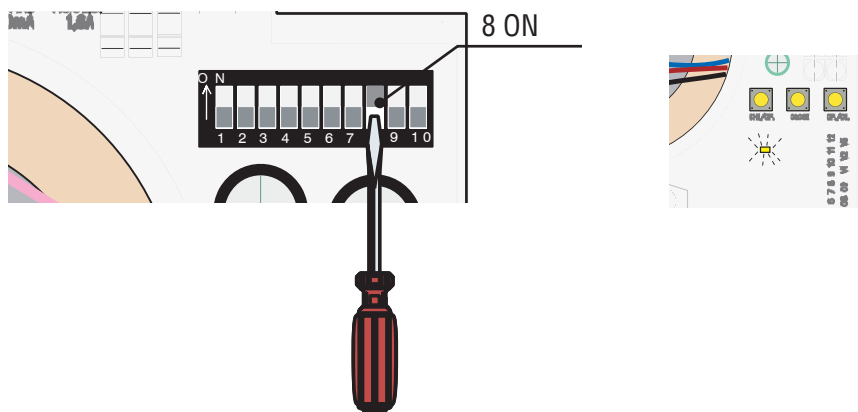
Adjustment of stop micro-switch during opening

Release the ratiomotor and move the door manually to approximately 30 mm from the desired opening. Rotate the cam until the micro-switch can be inserted and tighten the screw in the cam. Relock the ratiomotor.

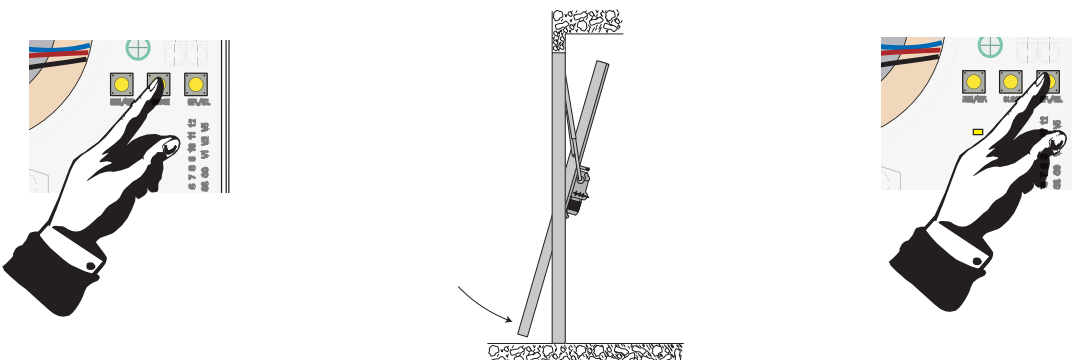


Closing End-Stop

Set dip-switch 8 to ON: the LED indicator flashes

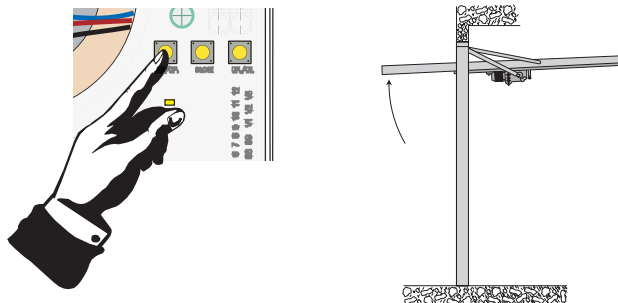


Press the “CLOSE” key and allow the garage door to arrive at the point of closing. Press the “OP/CL” key: the LED indicator remains lighted to signal that the closing end-stop has been recorded.



Opening End-Stop

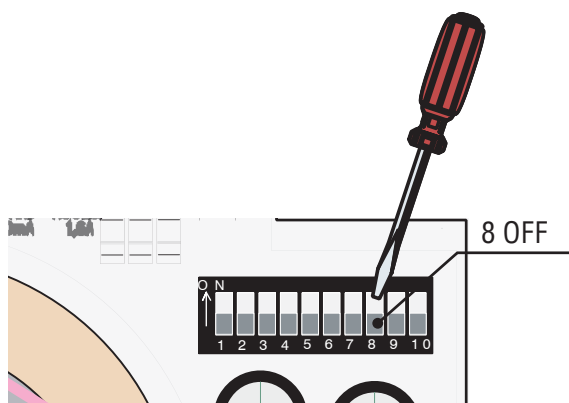
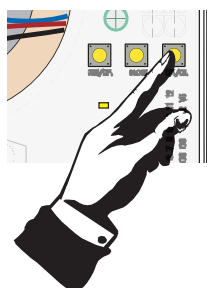
Press “CH1/OP” and allow the door to open completely.



Press the “OP/CL” key: the LED indicator remains lit to signal the memorisation of the open end-stop.

Note: if the “CH1/OP” key is pressed twice within 15”, the slowing during closing mode is deactivated and the “thrust reduction” function is automatically inserted, the function is made active when the door is about to close. The LED indicator will resume flashing after having pressed the key for the second time.

Reset dip-switch 8 to OFF. Note: if the LED indicator begins to flash rapidly after resetting dip 8, it is necessary to repeat the procedure from the beginning.



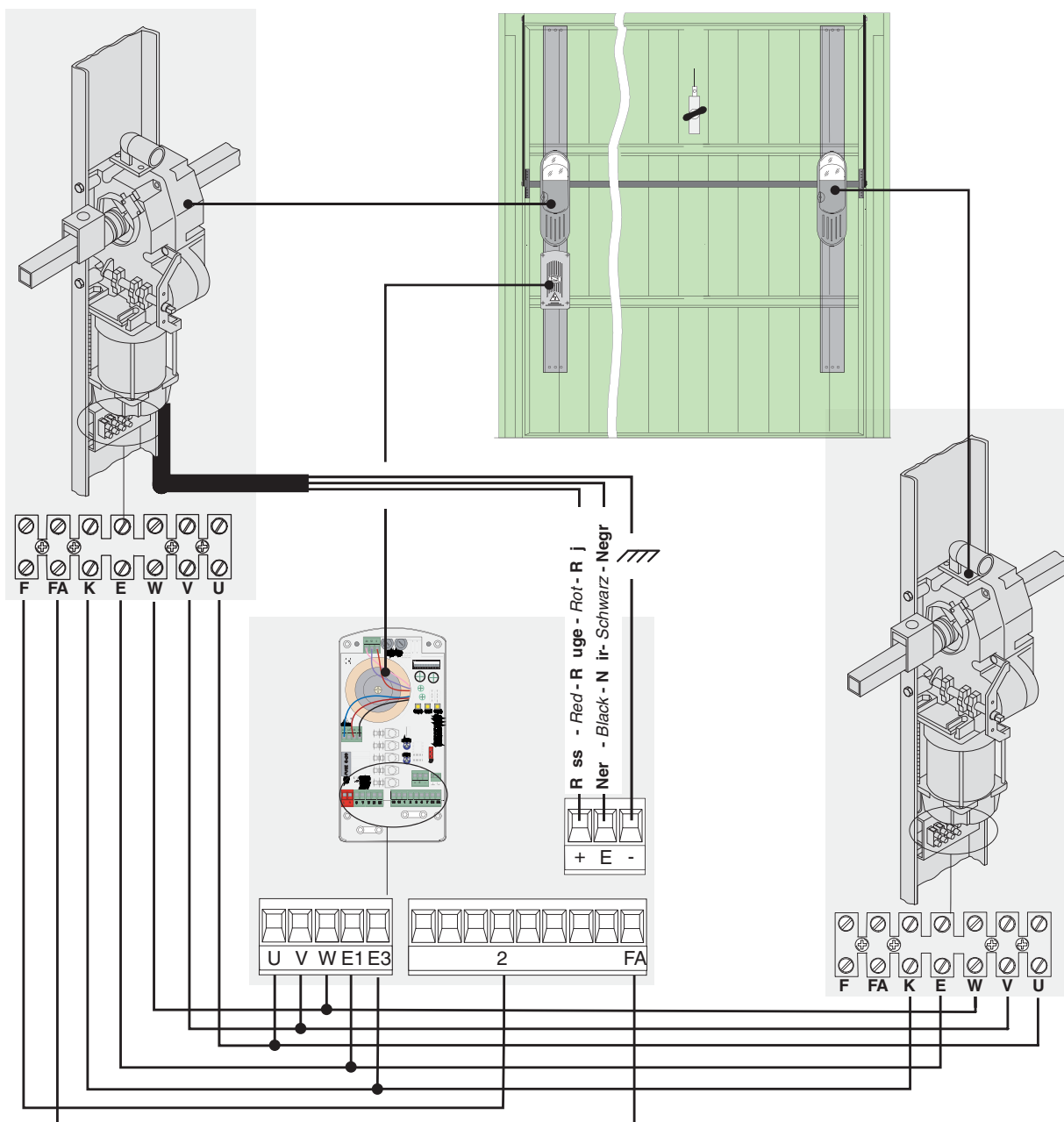
General notes during programming make sure to have memorised the closing end-stop first, otherwise the data will not remain memorised.

5.10 Connecting Two Motors

Should two motors be installed, connect them in parallel.

Use terminals U, V and W of the ZE5 control panel to connect both motors.

Note: Connect the encoder and the opening end-stop of a single motor.



All the data and information contained herein is considered subject to change at any time and at our discretion.

6 Radio Remote Control Installation Procedure

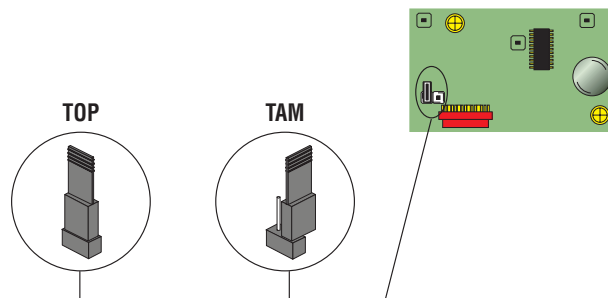


Please read the following instructions carefully prior to installation:

- preparing the radio board (par. 6.1);
- transmitter encoding procedure (par. 6.2);
- control board code memorisation (par. 6.3).

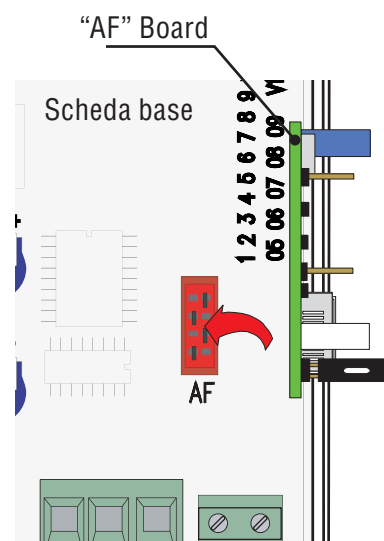
6.1 Preparing the Radio Board (AF)

1) For transmitters with 433.92 AM frequencies (TOP and TAM series) position the jumper on the AF43S board, as illustrated.



2) The AF board should be MANDATORILY inserted only when the mains power is off, because the motherboard only recognizes it when it is powered up

Frequency/MHz	Board	Transmitter
FM 26.995	AF130	TFM
FM 30.900	AF150	TFM
AM 26.995	AF26	TOP
AM 30.900	AF30	TOP
AM 433.92	AF43S / AF43SM	TAM / TOP
AM 433.92	AF43SR	ATOMO
AM 40.685	AF40	TOUCH



6.2 Transmitter Encoding Procedure

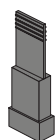
Top quartzite series

T262M - T264M - T2622M - T302M - T304M - T3022M common encoding procedure

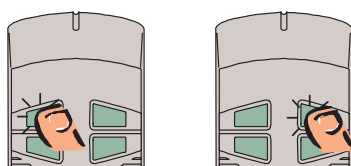
1 mark a code (even for the archive)

P1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OFF
P2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ON
	1	2	3	4	5	6	7	8	9	10

2 insert J code jumper

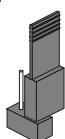


3 record it

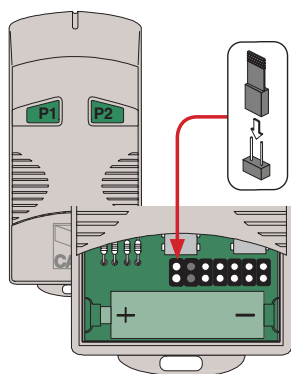


Press P1 or P2 in sequence to record the code; on the tenth impulse, a double beep will confirm the memorisation has taken place.

4 unplug J jumper



TOP T262M - T302M



The first code should be recorded by keeping the jumpers positioned for channels 1 and 2 as in fig. A; see fig. B for any further settings on different channels.

FIG.A

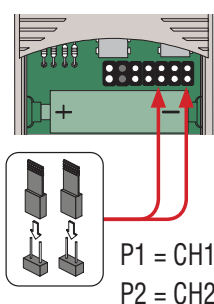
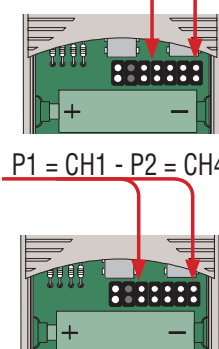
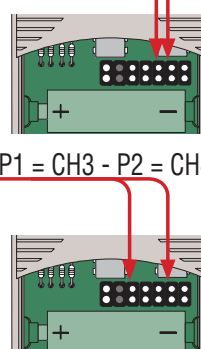


FIG.B

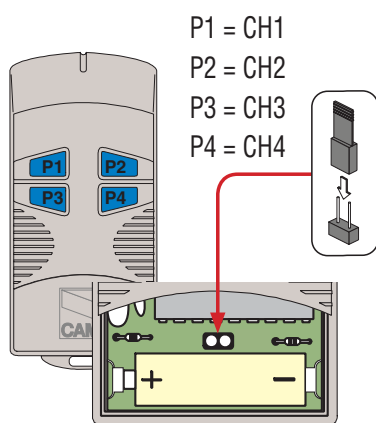
P1 = CH1 - P2 = CH3



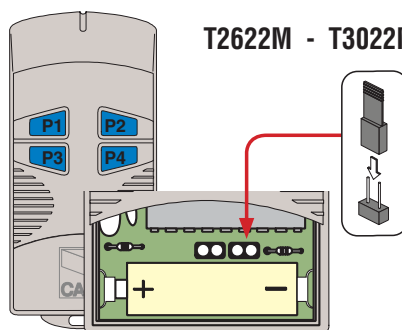
P1 = CH3 - P2 = CH2



T264M - T304M

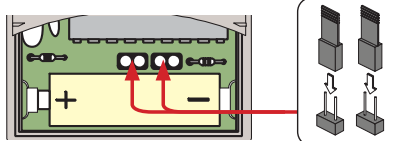


T2622M - T3022M



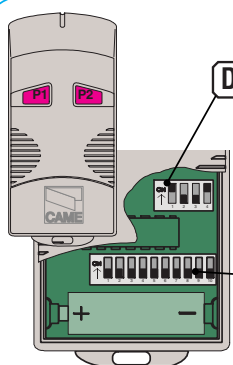
P1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OFF
P2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ON
	1	2	3	4	5	6	7	8	9	10	

2° Code
P3 = CH1
P4 = CH2

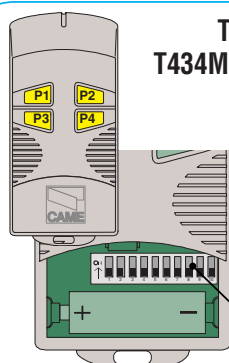
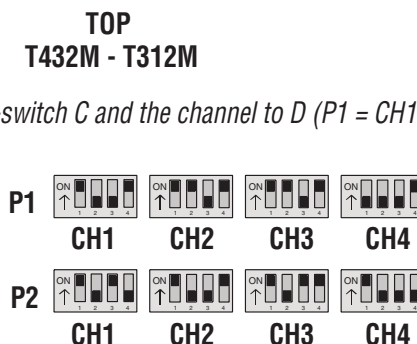


All the data and information contained herein is considered subject to change at any time and at our discretion.

Top Series



Set the code to dip-switch C and the channel to D (P1 = CH1 and P2 = CH2, default setting)



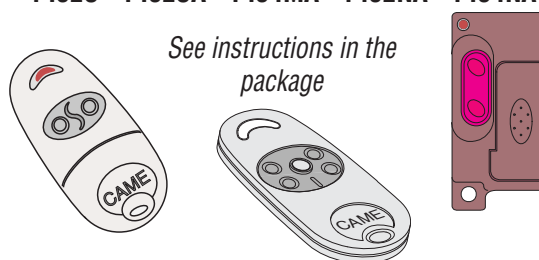
TOP T434M - T314M

Set the code only

P1 = CH1
P2 = CH2
P3 = CH3
P4 = CH4

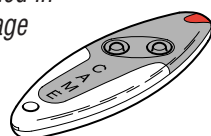
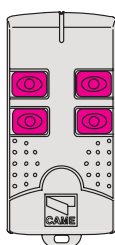
TOP T432S - T432SA - T434MA - T432NA - T434NA

See instructions in the package



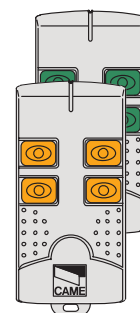
TAM T432 - T434 - T438 - TAM432SA

See instructions sheet included in the package



TFM T132 - T134 - T138 T152 - T154 - T158

See instructions sheet included in the package



Atomo Series

AT01 - AT02 - AT04

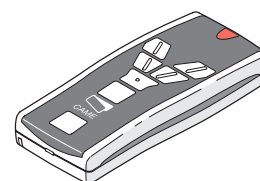
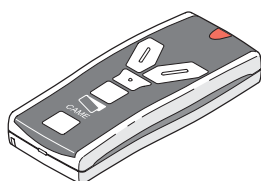
See the instructions sheet included with the AF43SR board.



Touch Series

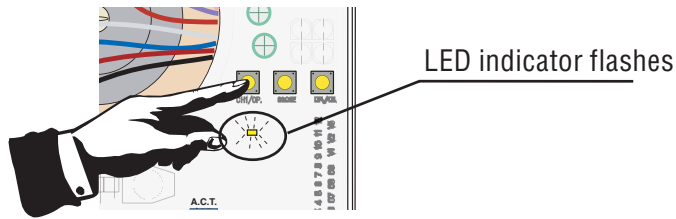
TCH 4024 - TCH 4048

See instructions in the package

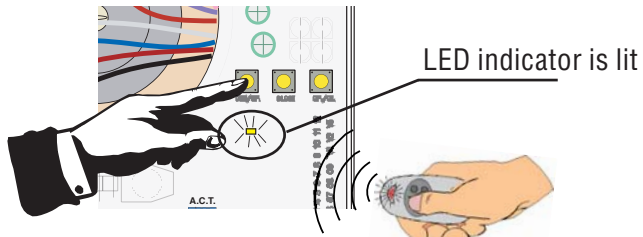


6.3 Code Memorisation

-Keep the "CH1/OP" key pressed down on the control board (the LED indicator flashes);



- the code is sent by means of a transmitter key, and the LED indicator will remain lighted to signal that that



7 Solving Problems

THE GARAGE DOOR DOES NOT MOVE:

- CHECK the 230 V AC power supply on terminals L-N.
- Check the fuses.
- Check the 24V power supply on terminals 10-11.
- Check the STOP key connection, if unused, short-circuit terminals 1-2.
- Repeat encoder programming.

THE GARAGE DOOR REMAINS OPEN:

- check the automatic closing function, (dip-switch 1).
- check if control devices are functioning properly.
- check if there is something obstructing the safety devices.
- check if all the n.c. contacts are set to on (if not being used).

8 Demolition and Disposal



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

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

DISPOSAL OF PACKAGING – Our packaging is made up of various types of materials. Most of them (paper, plastics, etc.) may be disposed of in normal garbage collection bins and can be recycled by disposing of in specific recyclable material collection bins and disposal in authorized centres.

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

PLEASE DISPOSE OF PROPERLY!

PRODUCT DISPOSAL – Our products are made up of various types of materials. Most of them (aluminium, plastics, iron, electric cables etc.) may be disposed of in normal garbage collection bins and can be recycled by disposing of in specific recyclable material collection bins and disposal in authorized centres. Other components (electric boards, batteries and radio remote controls, etc.), however, may contain hazardous substances. They should therefore be removed and given to qualified service companies for proper disposal. Prior to disposal, it is always advisable to check specific regulations in force in the place of disposal.

PLEASE DISPOSE OF PROPERLY!

9 Maker's statement



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)

The representatives of

Date of the present declaration 07/12/2001

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 ...

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	MACHINERY SAFETY.
EN 12453	INDUSTRIAL, COMMERCIAL AND OTHER CLOSING MECHANISMS.
EN 12445	INDUSTRIAL, COMMERCIAL AND OTHER CLOSING MECHANISMS.
EN 12978	SAFETY DEVICES FOR POWER OPERATED DOORS AND GATES
EN 60335 - 1	SAFETY IN APPARATUS FOR HOME USE.
EN 60204 - 1	MACHINERY SAFETY.
EN 61000 - 6 - 2	ELECTROMAGNETIC COMPATIBILITY.
EN 61000 - 4 - 4	ELECTROMAGNETIC COMPATIBILITY.
EN 61000 - 4 - 5	ELECTROMAGNETIC COMPATIBILITY.

ZE5

IMPORTANT CAUTION!

... comply with the Italian National Legal Provisions that transpose the following Community Directives (where specifically applicable):

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

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

Signatures of the Representatives
TECHNICAL MANAGER
Mr. Gianni Michielan

MANAGING DIRECTOR
Mr. Paolo Menuzzo

All the data and information contained herein is considered subject to change at any time and at our discretion.

ZE5v0.7_319T92 Vo1

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TOWN STREET, SANDIACRE
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