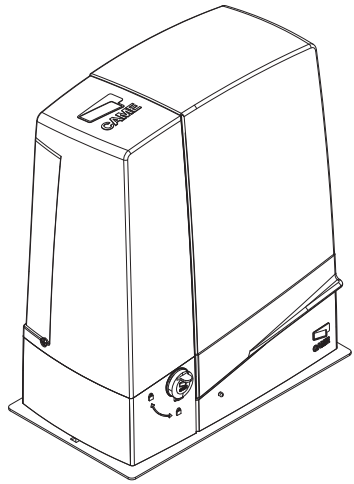
CAME

CAME.COM

FA00014-EN

Sliding gate operator
BXV series



SDN4/SDN6/SDN8/SDN10
SDN4-110/SDN6-110/SDN8-110/SDN10-110

INSTALLATION OPERATION AND MAINTENANCE MANUAL

EN English

DICHIARAZIONE DI INCORPORAZIONE allegato /DECLARATION OF INCORPORATION annex / ERKLÄRUNG FÜR DEN EINBAU anhang / DÉCLARATION D'INCORPORATION annexe / DECLARACIÓN DE INCORPORACIÓN anexo / DECLARAÇÃO DE INCORPORAÇÃO anexo / DEKLARACJA WBUDOWANIA załączniku / INBOUWVERKLARING bijlage IIB - 2006/42/CE

Fabbricante / Manufacturer / Hersteller / Fabricant / Fabricante / Fabricante / Wytwórca / Fabrikant

Came S.p.a.

Indirizzo / address / adresse / adresse / direcciòn / endereço / adres / adres

Via Martiri della Libertà 15 31030 - Dosson di Casier Treviso - Italy

CAME
safety&comfort

DICHIARA CHE LE AUTOMAZIONI PER CANCELLI SCORREVOLI / DECLARES THAT THE DRIVES FOR SLIDING GATES / ERKLÄRT DASS DIE AUTOMATISIERUNGEN FÜR SCHIEBETORE / DECLARE QUE LES AUTOMATISATIONS POUR PORTAILS COULISSANTS / DECLARA QUE LAS AUTOMATIZACIONES PARA PUERTAS CORREDERAS / DECLARA QUE AS AUTOMATIZAÇÕES PARA PORTÕES DE CORRER / OŚWIADCZA ZE AUTOMATYKA DO BRAM PRZESUWNYCH / VERKLAART DAT DE AUTOMATISERING VOOR SCHUIFHEKKEN

SDN10 - SDN8 - SDN6 - SDN4

SONO CONFORMI ALLE DISPOSIZIONI DELLE SEGUENTI DIRETTIVE / THEY COMPLY WITH THE PROVISIONS OF THE FOLLOWING DIRECTIVES / DEN VORGABEN DER FOLGENDEN RICHTLINIEN ENTSPRECHEN / SONT CONFORMES AUX DISPOSITIONS DES DIRECTIVES SUIVANTES / CUMPLEN CON LAS DISPOSICIONES DE LAS SIGUIENTES DIRECTIVAS / ESTÃO DE ACORDO COM AS DISPOSIÇÕES DAS SEGUINTES DIRECTIVAS / SĄ ZGODNE Z POSTANOWIENIAMI NASTĘPUJĄCYCH DYREKTYW EUROPEJSKICH / VOLDOEN AAN DE VOORSCHRIFTEN VAN DE VOLGENDE RICHTLIJNEN:

- COMPATIBILITA' ELETTROMAGNETICA / ELECTROMAGNETIC COMPATIBILITY / ELEKTROMAGNETISCHE VERTRÄGLICHKEIT / COMPATIBILITÉ ÉLECTROMAGNÉTIQUE / COMPATIBILIDAD ELECTROMAGNÉTICA / COMPATIBILIDADE ELETROMAGNÉTICA / KOMPATYBILNOŚCI ELEKTROMAGNETYCZNEJ / ELEKTROMAGNETISCHE COMPATIBILITEIT : 2014/30/UE,
- BASSA TENSIONE / LOW VOLTAGE / NIEDERSPANNUNG / BASSE TENSION / BAJA TENSIÓN / BAIXA TENSÃO / NISKIEGO NAPIĘCIA / LAAGSPANNING : 2014/35/UE.

Riferimento norme armonizzate ed altre norme tecniche / Refer to European regulations and other technical regulations / Harmonisierte Bezugsnormen und andere technische Vorgaben / Référence aux normes harmonisées et aux autres normes techniques / Referencià normas armonizadas y otras normas técnicas / Referência de normas harmonizadas e outras normas técnicas / Odnosne normy ujednolicone i inne normy techniczne / Geharmoniseerde en andere technische normen waarnaar is verwezen

EN 61000-6-2:2005
EN 61000-6-3:2007+A1:2011
EN 62233:2008
EN 60335-1:2012+A11:2014
EN 60335-2-103:2015

RISPETTANO I REQUISITI ESSENZIALI APPLICATI: / MEET THE APPLICABLE ESSENTIAL REQUIREMENTS: / DEN WESENTLICHEN ANGEWANDTEN ANFORDERUNGEN ENTSPRECHEN: / RESPECTENT LES CONDITIONS REQUISES NECESSAIRES APPLIQUEES: / CUMPLEN CON LOS REQUISITOS ESENCIALES APLICADOS: / RESPEITAM O REQUISITOS ESSENCIAIS APLICADOS: / SPEŁNIAJĄ PODSTAWOWE WYMAGANIE WYRUNKI: / VOLDOEN AAN DE TOEPASBARE MINIMUM EISEN:

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; 1.5.1; 1.5.6; 1.5.8; 1.5.9; 1.5.9; 1.5.13; 1.6.1; 1.6.3; 1.6.4; 1.7.1; 1.7.2; 1.7.4

PERSONA AUTORIZZATA A COSTITUIRE LA DOCUMENTAZIONE TECNICA PERTINENTE / PERSON AUTHORISED TO COMPILE THE RELEVANT TECHNICAL DOCUMENTATION / PERSON DIE BEVOLLMÄCHTIGT IST, DIE RELEVANTEN TECHNISCHEN UNTERLAGEN ZUSAMMENZUSTELLEN / DOCUMENTATION TECHNIQUE SPECIFIQUE D'AUTORISATION A CONSTRUIRE DE / PERSONA FACULTADA PARA ELABORAR LA DOCUMENTACIÓN TÉCNICA PERTINENTE / PESSOA AUTORIZADA A CONSTITUIR A DOCUMENTAÇÃO TÉCNICA PERTINENTE / OSOBA UPOWAŻNIONA DO ZREDAGOWANIA DOKUMENTACJI TECHNICZNEJ / DEGENE DIE GEMACHTIGD IS DE RELEVANTE TECHNISCHE DOCUMENTEN SAMEN TE STELLEN.

CAME S.p.a.

La documentazione tecnica pertinente è stata compilata in conformità all'allegato VIIB. / The pertinent technical documentation has been drawn up in compliance with attached document VIIB. / Die relevante technische Dokumentation wurde entsprechend der Anlage VIIB ausgestellt. / La documentation technique spécifique a été remplie conformément à l'annexe IIB / La documentación técnica pertinente ha sido rellenada en cumplimiento con el anexo VIIB. / A documentação técnica pertinente foi preenchida de acordo com o anexo VIIB. / Odnosna dokumentacja techniczna została zredagowana zgodnie z załącznikiem VIIB. / De technische documentatie terzake is opgesteld in overeenstemming met de bijlage VIIB.

CAME S.p.a. si impegna a trasmettere, in risposta a una richiesta adeguatamente motivata delle autorità nazionali, informazioni pertinenti sulle quasi macchine, e / Came S.p.A., following a duly motivated request from the national authorities, undertakes to provide information related to the quasi machines, and / Die Firma Came S.p.A. verpflichtet sich auf eine angemessen motivierte Anfrage der staatlichen Behörden Informationen über die unvollständigen Maschinen, zu übermitteln, und / Came S.p.A. s'engage à transmettre, en réponse à une demande bien fondée de la part des autorités nationales, les renseignements relatifs aux quasi machines / Came S.p.A. se compromete a transmitir, como respuesta a una solicitud adecuadamente fundada por parte de las autoridades nacionales, informaciones relacionadas con las cuasimáquinas / Came S.p.A. compromete-se em transmitir, em resposta a uma solicitação motivada apropriadamente pelas autoridades nacionais, informações pertinentes às partes que comporham máquinas / Came S.p.A. zobowiązuje się do udzielenia informacji dotyczących maszyn niekończonych na odpowiednio umotywowaną prośbę, złożona przez kompetentne organy państwowe / Came S.p.A. verbindt zich ertoe om op met redenen omkleed verzoek van de nationale autoriteiten de relevante informatie voor de niet voltooide machine te verstrekken,

VIETA / FORBIDS / VERBIETET / INTERDIT / PROHIBE / PROIBE / ZABRANIA SIE / VERBIEDT

la messa in servizio finchè la macchina finale in cui deve essere incorporata non è stata dichiarata conforme, se del caso alla 2006/42/CE. / 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 / die Inbetriebnahme bevor die „Endmaschine" in die die unvollständige Maschine eingebaut wird, als konform erklärt wurde, gegebenenfalls gemäß der Richtlinie 2006/42/EU. / la mise en service tant que la machine finale dans laquelle elle doit être incorporée n'a pas été déclarée conforme, le cas échéant, à la norme 2006/42/CE. / la puesta en servicio hasta que la máquina final en la que será incorporada no haya sido declarada de conformidad de acuerdo a la 2006/42/CE / a colocação em funcionamento, até que a máquina final, onde devem ser incorporadas, não for declarada em conformidade, se de acordo com a 2006/42/CE. / Uruchomienia urzadzenia do czasu, kiedy maszyna, do której ma być wbudowany, nie zostanie oceniona jako zgodna z wymogami dyrektywy 2006/42/WE, jeśli taka procedura była konieczna. / deze in werking te stellen zolang de eindmachine waarin de niet voltooide machine moet worden ingebouwd in overeenstemming is verklaard, indien toepasselijk met de richtlijn 2006/42/EG.

Dosson di Casier (TV)
30 Maggio / May / Mai / Mai
/ Mayo / Maio / Maj / Mei 2016

Amministratore Delegato / Managing Director / General Direktor / Directeur Général / Director General / Administrador Delegado / Dyrektor Zarzadzajacy / Algemeen Directeur

Andrea Menuzzo

Fascicolo tecnico a supporto / Supporting technical dossier / Unterstützung technische Dossier / soutenir dossier technique / apoyo expediente técnico / apoiar dossier técnico / wspieranie dokumentacji technicznej / ondersteunende technische dossier: 001SDN10

Came 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

GENERAL PRECAUTIONS FOR USERS

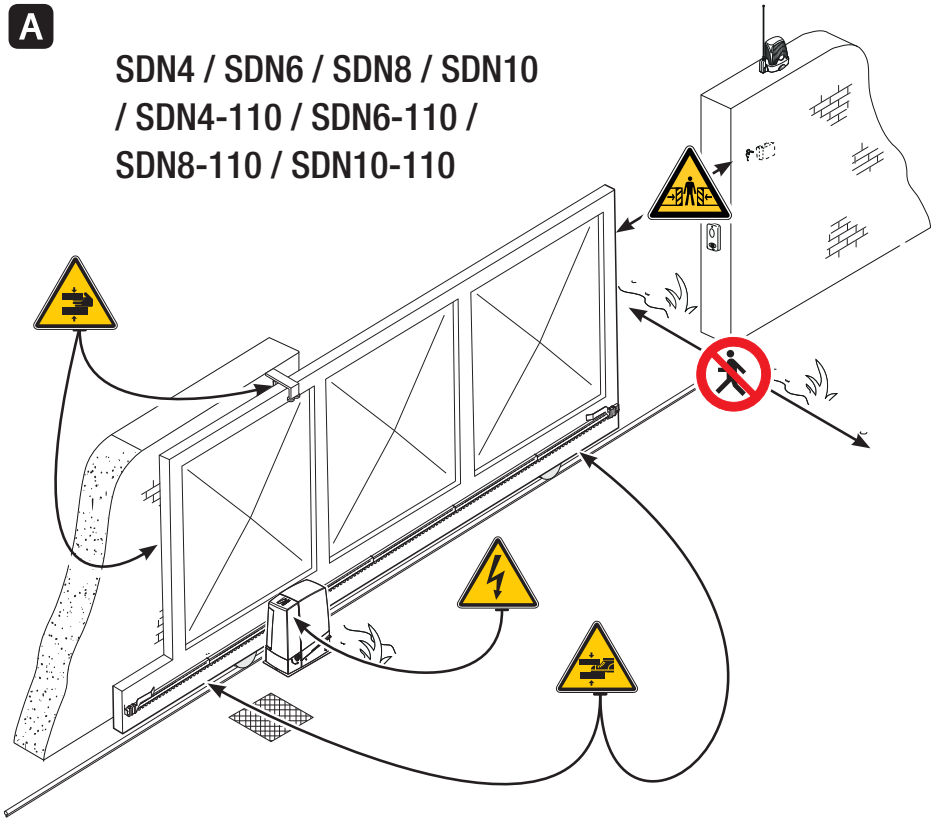
⚠ *WARNING! Important safety instructions. Carefully follow these instructions for the safety of people. Keep these instructions.*

• Before using this product, read all its safety precautions • This product should only be used for the purpose for which it was explicitly designed. Any other use is dangerous. CameS.P.A.is not liable for any damage caused by improper, wrongful and unreasonable use. • This product supplied by CameS.P.A.is deemed as "partly-completed machinery", pursuant to Machinery Directive 2006/42/CE. Partly-completed machinery is an assembly that almost constitutes a machine, but which, alone, cannot ensure a clearly defined application. Partly-completed machinery is only destined to be incorporated or assembled to other machinery or other partly-completed machinery or apparatuses to build machinery that is regulated by Directive 2006/42/CE. The final installation must be compliant with European directive 2006/42/CE and European reference standards: EN 13241-1, EN 12453, EN 12445 and EN 12635. • All system setting up and operator installation tasks must be conducted exclusively by qualified, expert staff • An in-depth report on any residual risks associated with the installation can be requested from the qualified, expert staff, along with instructions on how to operated the control devices • Make sure you are given and that you store all operating manuals related to the products that make up the final machinery • It is forbidden for users to perform any operations which are not expressly mentioned or required of them in the manuals For repairs, settings and extraordinary maintenance, please contact the technical assistance center. • This apparatus may be used by children of over eight years of age and by persons that are physically, mentally and sensorially challenged, or that have no experience or knowledge of it, provided that it happens under supervision, or after being trained on how to safely operate it and of the risks involved. • Children must no play with the device or its controls, including any transmitters. • Chaperon children to prevent children from playing with the apparatus and its controls • Cleaning and maintenance by users must not be performed by unsupervised children. • Frequently inspect the installations to check for signs of unbalances or wear-and-tear. • Do not use if repairs or settings are required. • If any repairs or changes need to be made to the system, release the operator and do not use it until safety conditions are restored by qualified, expert staff. • Cut off the electric power before releasing the operator for manually opening the gate, and before any procedure, to prevent any hazardous situations. Read the instructions • If the power-supply cable is damaged, it must be immediately replaced by the manufacturer or by an authorized technical assistance center, or in any case, by qualified staff, to prevent any risk • Always pay special attention to any dangerous points, which have to be labeled with specific pictograms and/or black and yellow stripes • When using a selector or control in maintained-action mode, always check that there are no people loitering in the area of operation of the moving parts, until the control is released • It is forbidden to access any protected internal parts. • The device emits a level of acoustic pressure equal or inferior to 70 dB (A). • In case of any malfunction or structural damage, immediately stop operation and call for qualified technical assistance. • Do not activate the operator if people, pets or objects are obstructing the passage.

THE FIGURE SHOWS A SHOWS THE MAIN POINTS OF DANGER FOR PEOPLE.

A

SDN4 / SDN6 / SDN8 / SDN10 / SDN4-110 / SDN6-110 / SDN8-110 / SDN10-110



DANGER OF HIGH VOLTAGE;

DANGER OF CRUSHING;

DANGER OF FOOT CRUSHING;

DANGER OF HAND ENTRAPMENT;

DO NOT TRANSIT THROUGH DURING MANEUVERING.

MANUALLY RELEASING THE GEARMOTOR

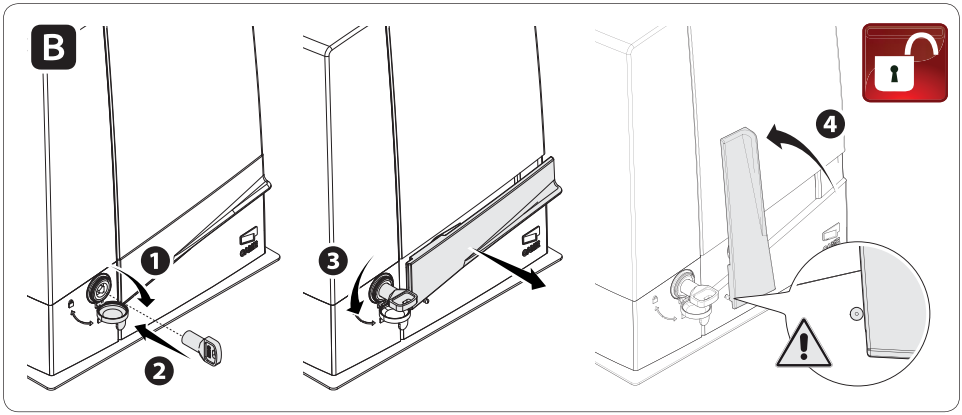
⚠ **Manually releasing the gate may cause an uncontrolled movement of the gate due to possible mechanical anomalies or unbalancing.**

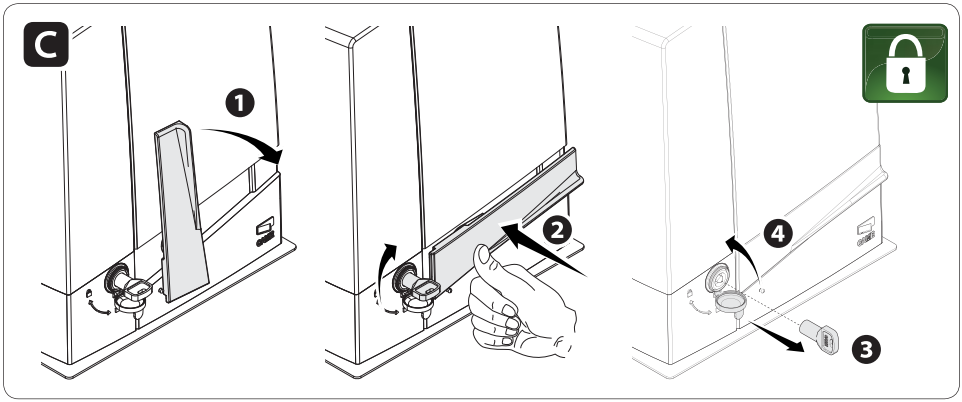
RELEASING (figure B)

- Fit the key and turn it clockwise.
- Pull outwards and activate the release handle.

LOCKING (figure C)

To lock the operator back up, lower the lever, reposition it and turn the key clockwise.





MAINTENANCE

⚠ ***WHEN CLEANING, MAINTAINING AND REPLACING PARTS, DISCONNECT THE OPERATOR FROM THE MAINS POWER SUPPLY. (EXCLUDING POINT B)***

At least every six months, perform ordinary maintenance jobs.

⚠ ***When performing this procedure, keep clear of the movement of the boom.***

A - Wipe clean the photocells' glass with a soft, slightly water-dampened cloth. Do not use any solvents or other chemicals.

B - Check that the photocells are working properly by waving an object between them when the gate is moving: is the gate inverts its direction or the maneuver is stopped, the photocells are working properly.

C - Check that there are no impediments to the proper operation of the operator, such as any overgrown vegetation that could block the photocells or any changes or yielding to the gate's structure.

Any repairs, or changes to the installation must be performed by qualified staff and all jobs logged carefully.

WHAT TO DO IF ...

ISSUES	POSSIBLE CAUSES	POSSIBLE FIXES
It neither opens nor closes	• Power supply is missing • The gearmotor is stuck • The transmitter is emitting a weak signal or no signal at all • Control buttons or selectors stuck	• Check main power supply • Lock the gearmotor • Replace the batteries • Check integrity of devices and/or of electrical cables
The gate opens but does not close	• The photocells are working	• Check that there are no obstructions in the photocells' area of operation

⚠ ***If the problem cannot be solved by following the fixes in the table or if any malfunctions, anomalies, noises, vibrations or suspicious and unexpected behavior is experienced on the system, call for qualified assistance.***

GENERAL PRECAUTIONS FOR INSTALLERS

⚠ *WARNING! Important safety instructions.*
Follow all of these instructions. Improper installation can cause serious bodily harm.
Before continuing, also read the general precautions for users.

This product must only be used for its specifically intended purpose. Any other use is dangerous. CAME S.P.A. is not liable for any damage caused by improper, wrongful and unreasonable use. • This manual's product is defined by machinery directive 2006/42/CE as "partly-completed machinery". Quasi-completed machinery is a set that almost constitutes a machine, but which, alone, cannot ensure a clearly defined application. Partly-completed machinery is only destined to be incorporated or assembled to other machinery or other partly-completed machinery or apparatuses to build machinery that is regulated by Directive 2006/42/CE. The final installation must be compliant with European directive 2006/42/CE and European reference standards: EN 13241-1, EN 12453, EN 12445 ed EN 12635. Given these considerations, all procedures stated in this manual must be exclusively performed by expert, qualified staff. • The manufacturer declines any liability for using non-original products; which would result in warranty loss • Keep this manual inside the technical folder along with the manuals of all the other devices used for your automation system. • Check that the temperature range shown on the operator is suitable to the locations where it will be installed. • Laying the cables, installation and testing must follow state-of-the-art procedures as dictated by regulations • If the power-supply cable is damaged, it must be immediately replaced by the manufacturer or by an authorized technical assistance center, or in any case, by qualified staff, to prevent any risk • During all phases of the installation make sure you have cut off the mains power source. • The operator cannot be used with gates fitted with pedestrian doors, unless its operation can be activated only when the pedestrian door is in safety position. • Make sure that people are not entrapped between the gate's moving and fixed parts due to the gate's movement. Before installing the operator, check that the gate is in proper mechanical condition, that it is properly balanced and that it properly closes: if any of these conditions are not met, do not continue before having met all safety requirements. • Make sure the gate is stable and the castors function properly and are well-greased, and that it opens and closes smoothly. • The guide rail must be well-fastened to the ground, entirely above the surface and free of any impediments to the gate's movement. • The rails of the upper guide must not cause any friction. • Make sure that opening and closing limiters are fitted • Make sure the operator is installed onto a sturdy surface that is protected from any collisions • Make sure that mechanical stops are already installed • If the operator is installed lower than 2.5 from the ground or from any other access level, fit any protections and signs to prevent hazardous situations. • Do not fit the operator upside down or onto elements that could yield to its weight. If necessary, add reinforcements to the fastening points • Do not install door or gate leaves on tilted surfaces • Check that no lawn watering devices spray the operator with water from the bottom up. • Any residual risks must be indicated clearly with proper signage affixed in visible areas. All of which must be explained to end users. • Suitably section off and demarcate the entire installation site to prevent unauthorized persons from entering the area, especially minors and children. • Fit cautionary signs, such as the gate plate, wherever needed and in plain sight. • Use proper protections to prevent mechanical hazards when people are loitering around the machinery's range of action, for example, avoid crushing hazards between the rack and pinion. • The electrical cables must run through the cable glands and must not touch any heated parts, such as the motor, transformer, and so on). • 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. • All opening controls must be installed at least 1.85 m from the perimeter of the gate's working area, or where they cannot be reached from outside the gate. • All switches in maintained action mode must be positioned so that the moving gates leaves, the transit areas and vehicle thru-ways are completely visible, and yet the switches must be also away from any moving parts • Unless the action is key operated, the control devices must be fitted at, at least, 1.5 m from the ground and must not be accessible to the public. • To pass the collision force test use a suitable sensitive safety-edge. Install it properly and adjust as needed. • Before handing over to users, check that the system is compliant with the 2006/42/CE uniformed Machinery Directive. Make sure the settings on the operator are all suitable and that any safety and protection devices, and also the manual release, work properly. • Affix a permanent tag,

THAT DESCRIBES HOW TO USE THE MANUAL RELEASE MECHANISM, CLOSE TO THE MECHANISM. • MAKE SURE TO HAND OVER TO THE END USER, ALL OPERATING MANUALS FOR THE PRODUCTS THAT MAKE UP THE FINAL MACHINERY. THE FIGURE SHOWS A (PAGE 4) SHOWS THE MAIN POINTS OF DANGER FOR PEOPLE.

KEY

🕮 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.

The measurements, unless otherwise stated, are in millimeters.

DESCRIPTION

Operator complete with control board, movement control and obstruction detection device and mechanical limit switches for sliding gates weighing up 1,000 Kg and measuring 20 m in length.

INTENDED USE

The operator is designed to power sliding gates in residential and apartment block settings.
🕮 Any installation and/or use other than that specified in this manual is forbidden.

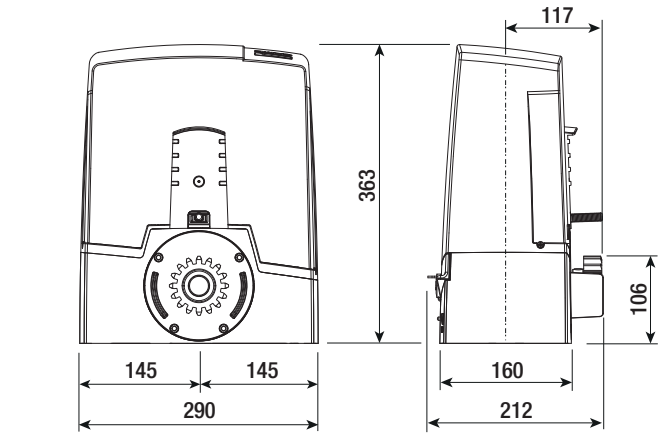
LIMITS TO USE

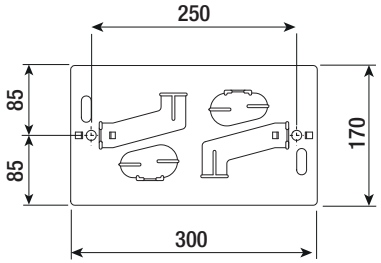
Type	SDN4 SDN4-110	SDN6 SDN6-110	SDN8 SDN8-110	SDN10 SDN10-110
Maximum gate-leaf length (m)	14	18	20	20
Maximum gate-leaf weight (kg)	400	600	800	1000
Pinion module	4	4	4	4

TECHNICAL DATA

Type	SDN4 SDN4-110	SDN6 SDN6-110	SDN8 SDN8-110	SDN10 SDN10-110
Protection rating (IP)	44			
Input voltage (V - 50/60 Hz)	110 / 230 AC			
Input voltage motor (V)	24 DC			
Stand-by consumption (W)	5.5			
Stand-by consumption with the RGP1 (W) module	0.5			
Maximum power (W)	170	270	400	
Duty cycle	HEAVY-DUTY SERVICE			
Operating temperature (°C)	-20 ÷ +55			
Thrust (N)	350	600	800	1000
Maneuvering speed (m/min)	12		11	
Weight (Kg)	10	10.5	11.5	11.7

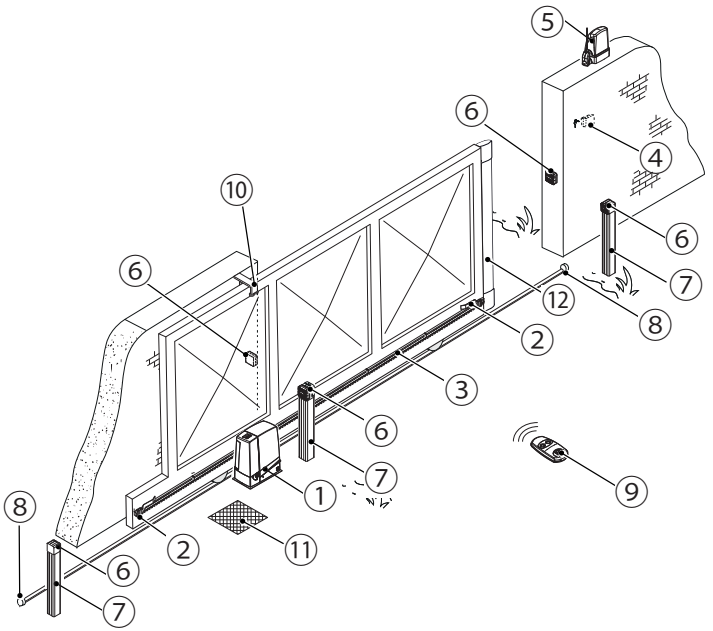
DIMENSIONS (MM)





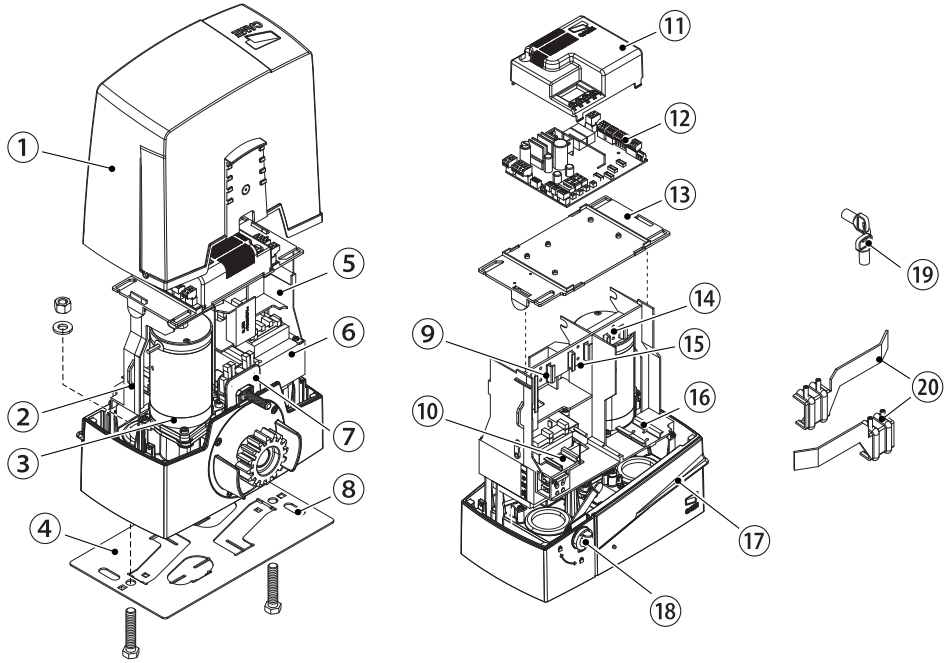
STANDARD INSTALLATION

1. Operator
2. Limit-switch fins
3. Rack
4. Selector
5. Flashing light
6. Photocells
7. Photocell post
8. Mechanical gate stop
9. Transmitter
10. Slide guides
11. Junction pit
12. Sensitive safety-edge



DESCRIPTION OF PARTS

1. Cover
2. Board-fitting support
3. Gearmotor
4. Anchoring plate
5. Housing for two emergency batteries
6. Transformer
7. Mechanical limit switch
8. Release cable threading hole
9. Housing for the RGP1 module
10. Housing for thermostat with heating rod
11. Protection card lid
12. Control board
13. Control-board holder
14. Housing for the RLB battery charger
15. Housing for UR042 module
16. Housing for SMA and RGSM001 sensors
17. Release lever
18. Lock
19. Release key
20. Limit-switch fins



GENERAL INSTALLATION INDICATIONS

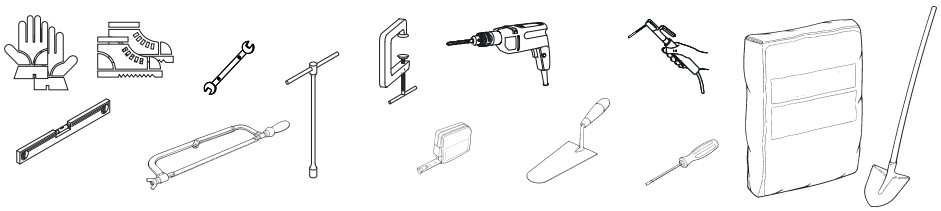
⚠ Only skilled, qualified staff must install this product.

PRELIMINARY CHECKS

⚠ Before beginning the installation, do the following:
• check that the upper slide-guides are friction-free;
• make sure there is are opening and closing mechanical gate stops;
• make sure that the point where the gearmotor is fastened is protected from any impacts and that the surface is solid enough;
• set up suitable tubes and conduits for the electric cables to pass through, making sure they are protected from any mechanical damage.

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.



CABLE TYPES AND MINIMUM SECTIONS

Connection	cable length	
	< 20 m	20 < 30 m
Input voltage for 230 V AC control board (1P+N+PE)	3G x 1.5 mm^2	3G x 2.5 mm^2
Signaling devices	2 x 0.5 mm^2	
Command and control devices	2 x 0.5 mm^2	
Safety devices (photocells)	(TX = 2 x 0.5 mm^2) (RX = 2 x 0.5 mm^2)	

🕮 When operating at 230 V and outdoors, use H05RN-F-type cables that are 60245 IEC 57 (IEC) compliant; whereas indoors, use H05VV-F-type cables that are 60227 IEC 53 (IEC) compliant. For power supplies up to 48 V, you can use FROR 20-22 II-type cables that comply with EN 50267-2-1 (CEI).

🕮 To connect the antenna, use the RG58 (we suggest up to 5 m).

🕮 For paired connection and CRP, use a UTP CAT5-type cable (up to 1,000 m long).

🕮 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. For connecting products that are not contemplated in this manual, see the literature accompanying said products

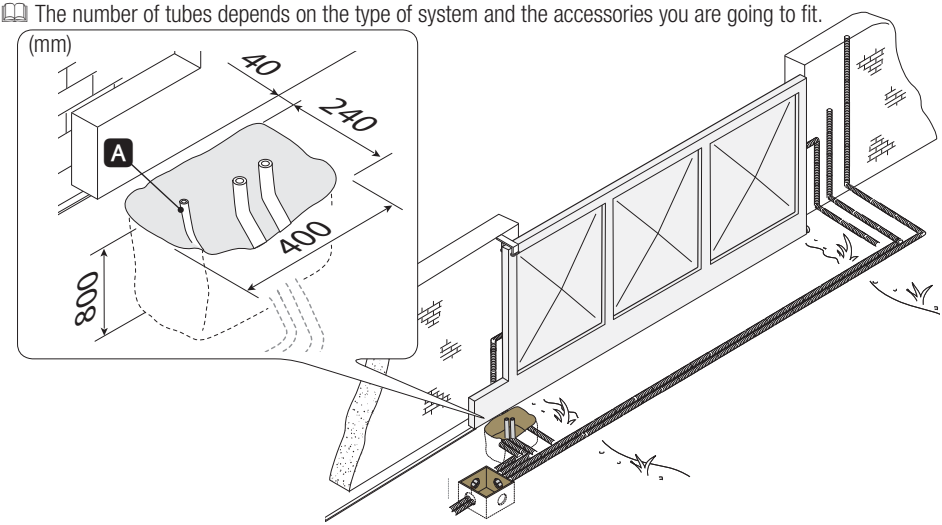
INSTALLING

⚠The following illustrations are mere examples. Consider that the space available where to fit the barrier and accessories will vary depending on the area where it is installed. It is up to the installer to find the most suitable solution.

CORRUGATED TUBE LAYING

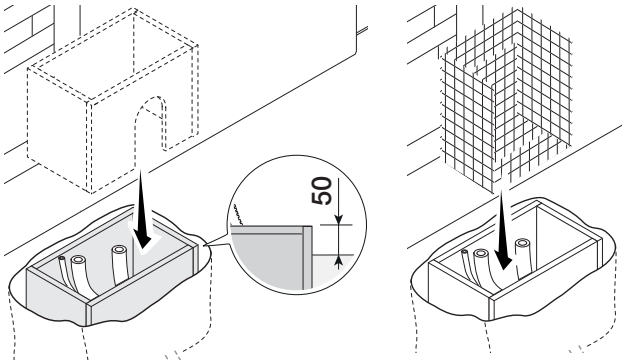
Dig a hole for the foundation frame.
Set up the corrugated tubes needed for the wiring coming out of the junction pit.
For connecting the gearmotor we suggest using a Ø 40 mm corrugated tube, whereas for the accessories we suggest Ø 25 mm tubes.
Set up a Ø 20 mm tube for running through the external release cable **A**.

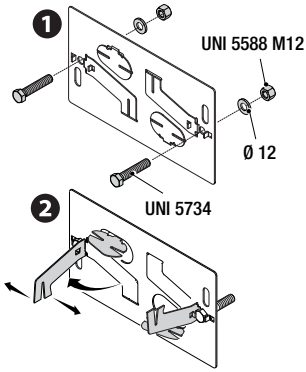
📖 The number of tubes depends on the type of system and the accessories you are going to fit.



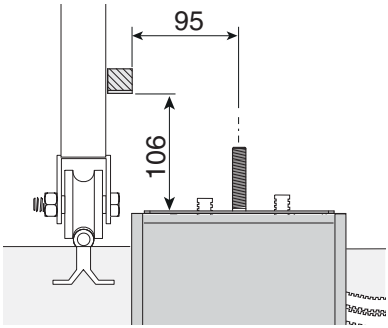
LAYING THE ANCHORING PLATE

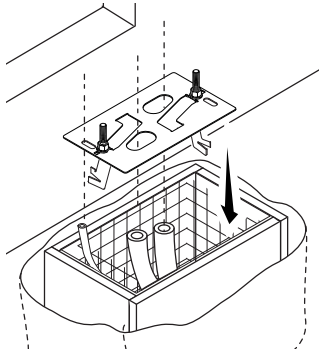
Set up a foundation frame that is larger than the anchoring plate and sink it into the dug hole. The foundation frame must jut out by 50 mm above ground level.
Fit an iron cage into the foundation frame to reinforce the concrete.
Fit the bolts into the anchoring plate and lock them using the washers and nuts. Remove the pre-shaped clamps using a screw driver or pliers.



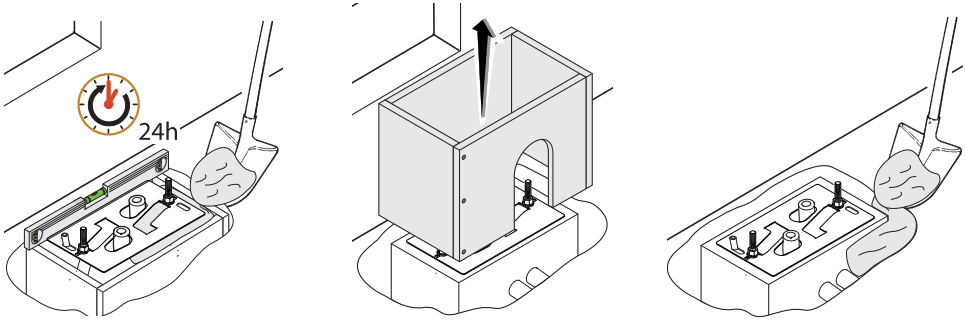


If the rack is already there, place the anchoring plate, being careful to respect the measurements shown in the drawing.
Careful! The tubes must pass through their corresponding holes.





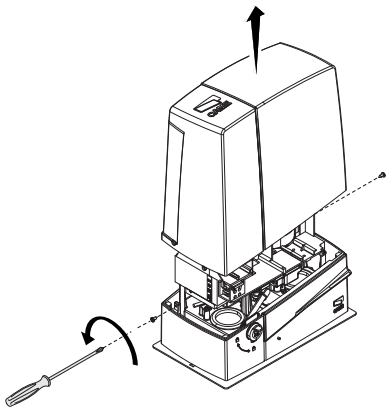
Fill the foundation frame with concrete. The plate must be perfectly level with the bolts which are entirely above surface.
Wait at least 24 hrs for the concrete to solidify.
Remove the foundation frame and fill the hole with earth around the concrete block.

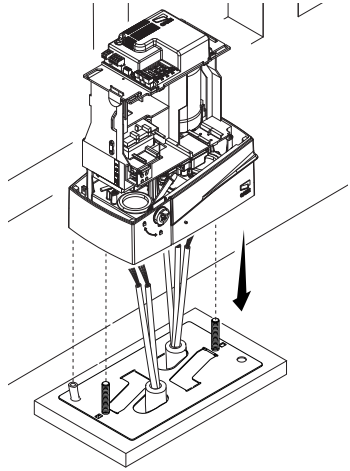


Remove the nut and washer from the bolts
Fit the electric cables into the tubes so that they come out about 600 mm.

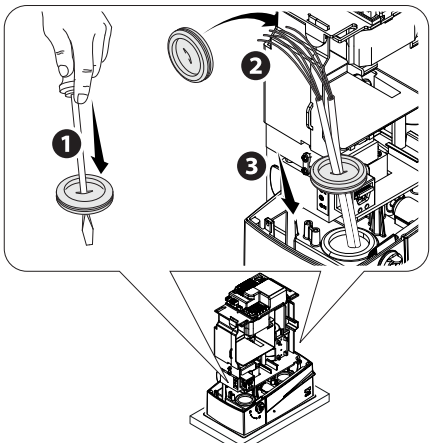
SETTING UP THE GEARMOTOR

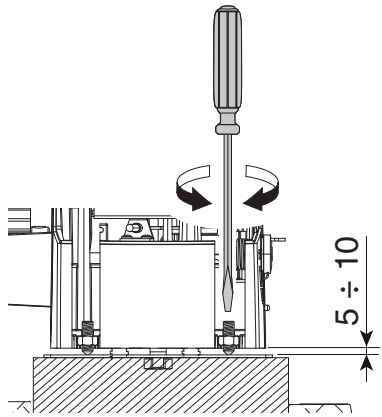
Remove the gearmotor cover by loosening the side screws.
Place the gearmotor above the anchoring plate.
Careful! The electric cables must pass under the gearmotor case.





Perforate the cable gland, pass the cables through and fit it into its corresponding housing.
Raise the gearmotor by 5 to 10 mm from the plate by turning the threaded feet, to make room for further pinion and rack adjustments.

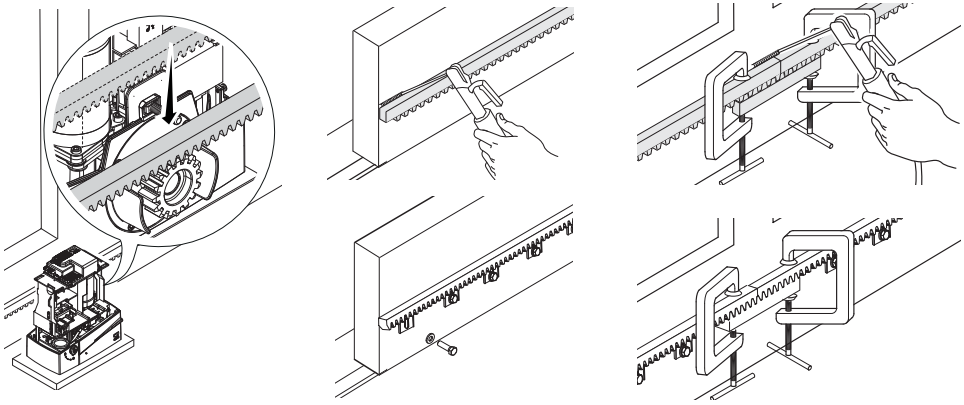




FASTENING THE RACK

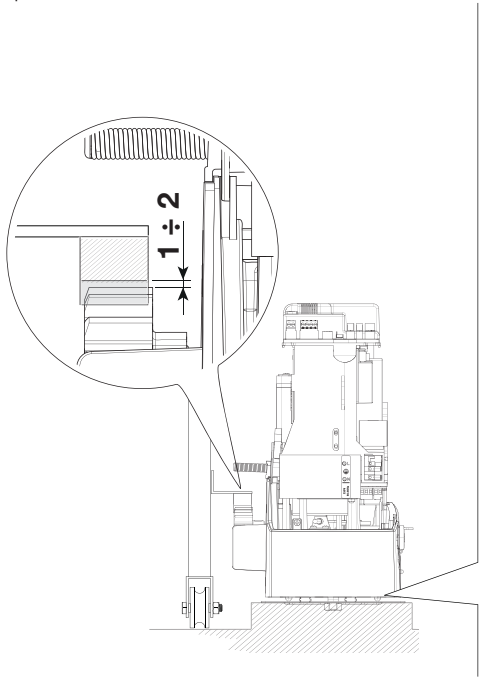
🕮 If the rack is already set up, the next step should be to adjust the rack-and-pinion coupling distance, otherwise, fasten it:
- release the gearmotor (see RELEASING THE GEARMOTOR paragraph);
- rest the rack above the gearmotor pinion;
- weld or fasten the rack to the gate along its entire length.

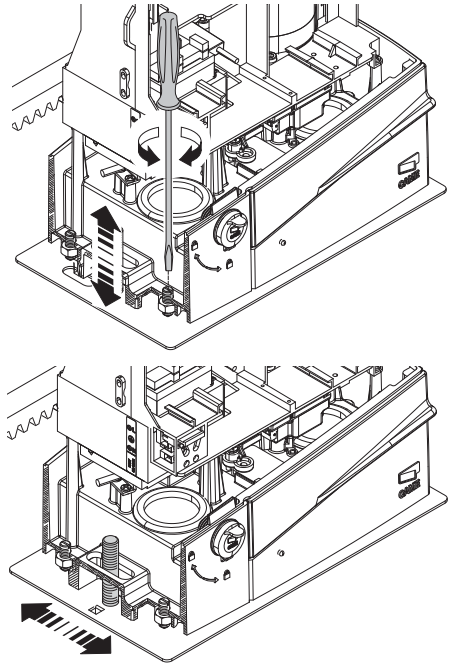
To assemble the rack modules, use an extra piece and rest it under the joint, then fasten it using two clamps.



ADJUSTING THE PINION-RACK COUPLING

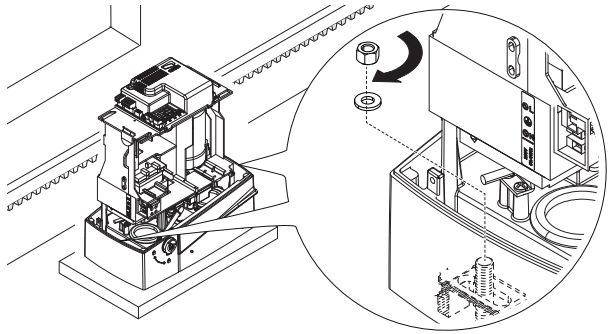
Manually open and close the gate and adjust the pinion-rack coupling distance using the threaded feet (vertical adjustment) and the holes (horizontal adjustment). This prevents the gate's weight from bearing down on the operator.





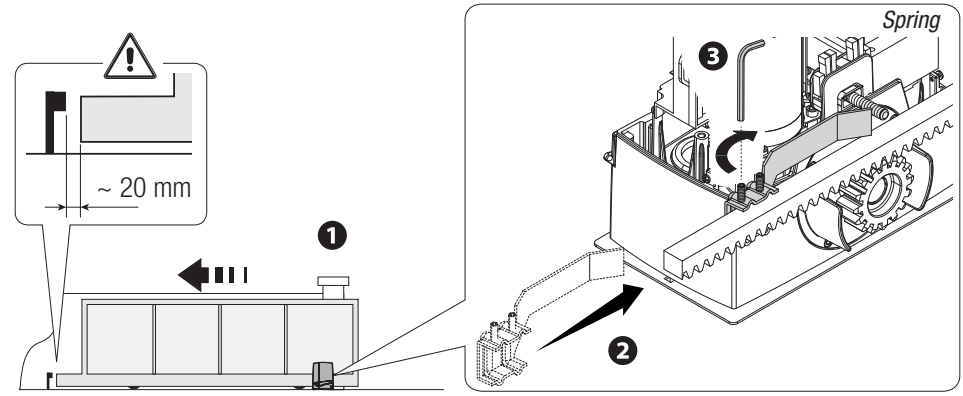
FASTENING THE GEARMOTOR

Complete the adjusting, fasten the gearmotor to the plate using the washers and nuts.

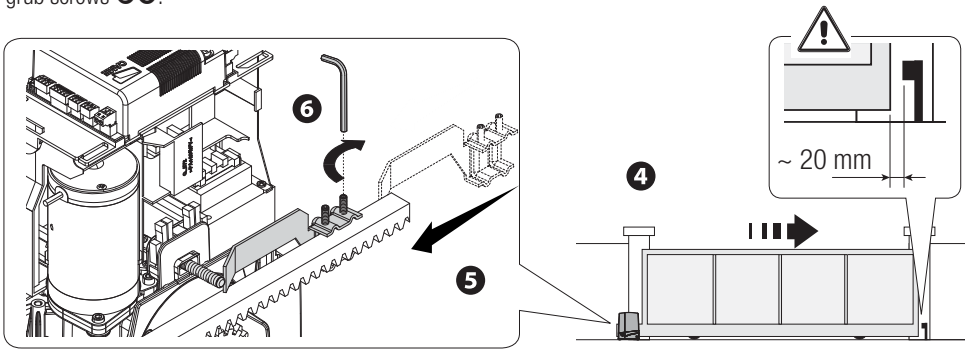


ESTABLISHING THE LIMIT-SWITCH POINTS

For opening:
- open the gate ❶;
- fit the opening limit-switch fin onto the rack until the micro switch activates (spring) and fasten it using the grub screws ❷❸.



For closing:
- close the gate ❹;
- fit the closing limit-switch fin into the rack until the micro-switch is activated (spring) and fasten it using the grub screws ❺❻.



ELECTRICAL CONNECTIONS AND PROGRAMMING

⚠Warning! Before working on the control panel, cut off the main power supply and, if present, remove any batteries.

Power supply to the control board and control devices : 24 V AC/ DC.

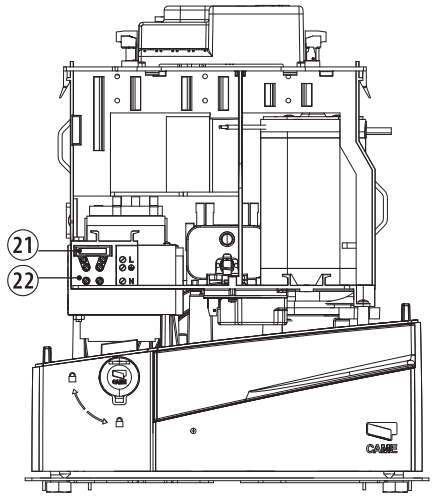
Functions on the input and output contacts, time adjustments and user-management settings are set and viewed on the control board's display.

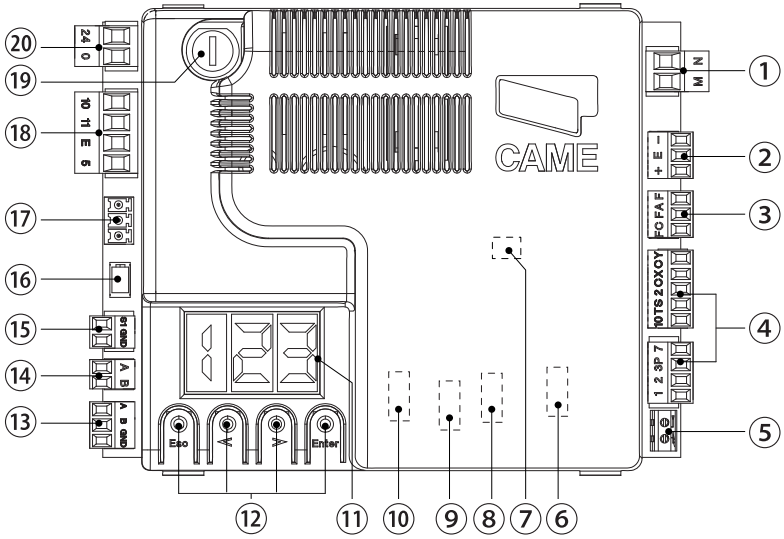
All wiring connections are quick-fuse protected.

Fuses	ZN7
LINE - Line	1.6 A-F (230 V) / 3.15 A-F (110 V)
ACCESSORIES - Accessories	2 A-F

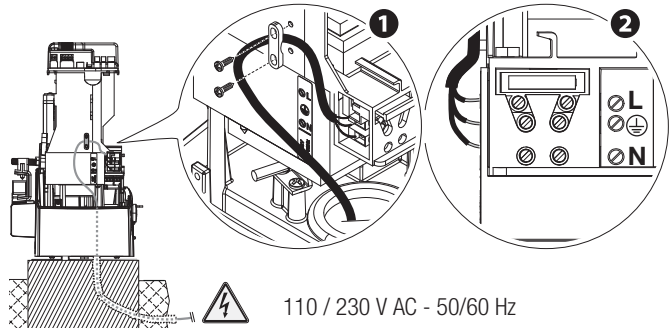
DESCRIPTION OF PARTS

1. Terminal for gearmotors
2. Terminals for encoders
3. Terminals for limit-switches
4. Command and safety devices terminals
5. Antenna terminal
6. AF card connector
7. Memory Roll card connector
8. R700/R800 board connector
9. RSE board connector
10. Connector for the RIO-CONN card
11. Display
12. Programming buttons
13. Terminals for paired of CRP connection
14. Terminal board for keypad devices
15. Terminal board for transponder selector
16. Connector for the GSM module
17. Terminals for the RGP1 module
18. Terminals for signaling devices
19. Accessories fuse
20. Terminals for powering the control board
21. Line fuse
22. Power supply terminal board

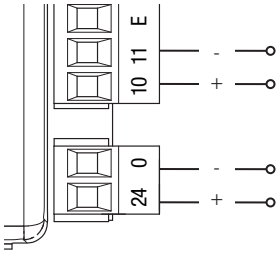




INPUT VOLTAGE



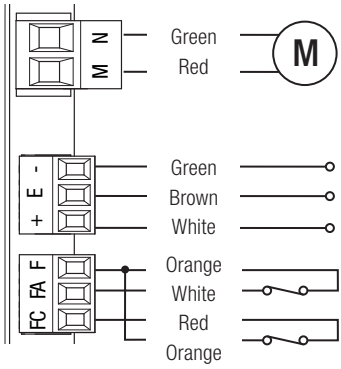
110 / 230 V AC - 50/60 Hz



24 V AC/DC - max 40 W accessories power-supply output

24 V AC/DC control board power-supply input

FACTORY WIRING



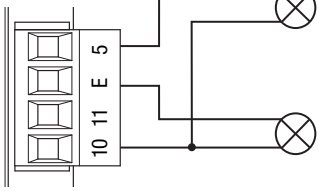
24 V DC gearmotor

Encoder

Opening limit-switch (NC contact)

Closing limit-switch (NC contact)

SIGNALING DEVICES

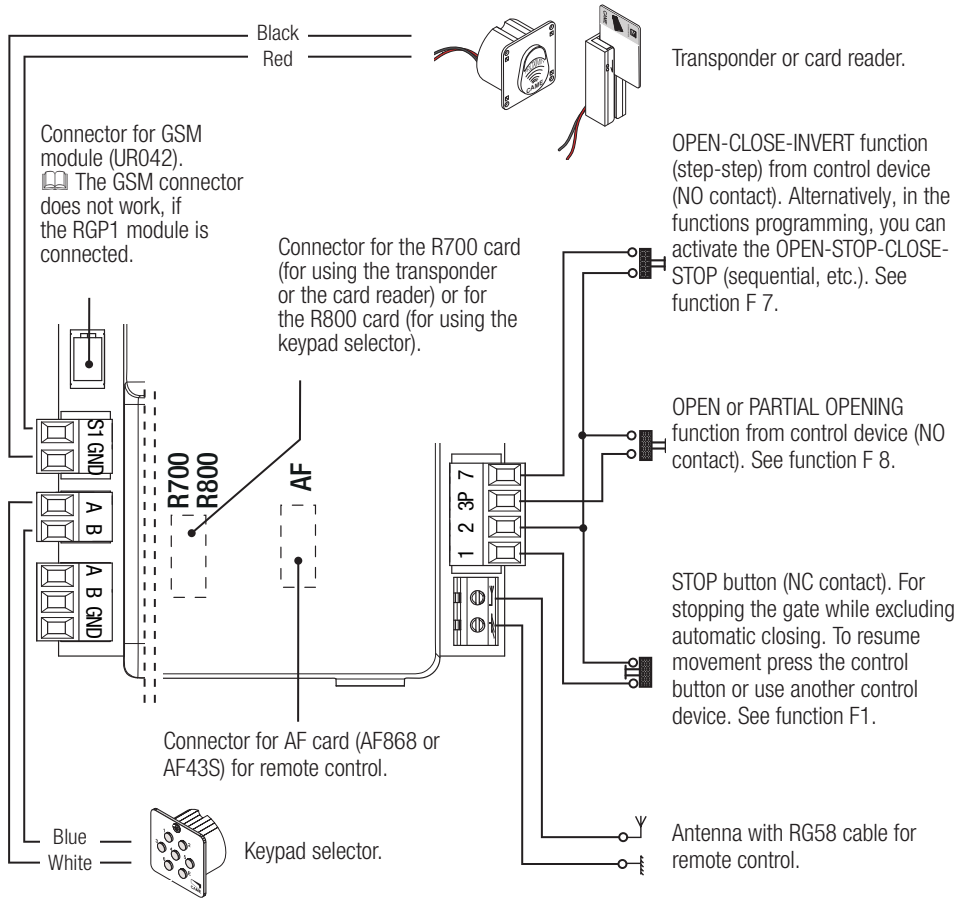


Gate open signaling output
(Contact rated for: 24 V AC/DC - 3 W max.).
See function F 10.

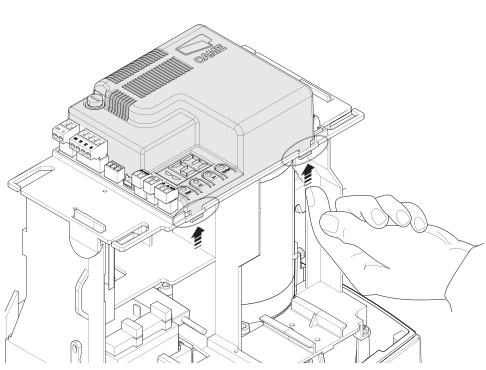
Either flashing light or cycle light connection output
(Contact rated for: 24 V AC/DC - 25 W max.).
See function F 18.

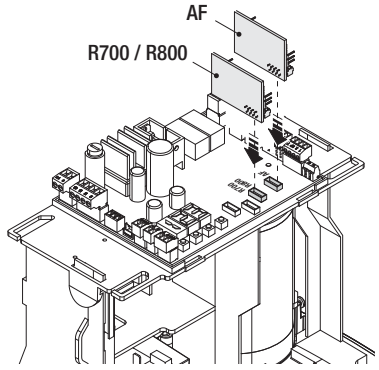
COMMAND AND CONTROL DEVICES

WARNING! For the system to work properly, before fitting any plug-in card, such as the AF or R800 one, you MUST CUT OFF THE MAINS POWER SUPPLY and, if present, disconnect any batteries.



To be able to snap in the cards into the dedicated connectors, remove the card cover.



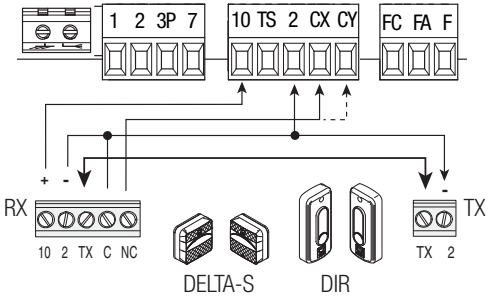


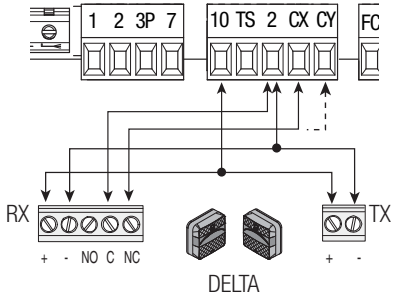
SAFETY DEVICES

Photocells

Configure contact CX or CY (NC), safety input for photocells.
See CX input functions (Function F2) or CY (Function F3) in:
- C1 reopening during closing. When the gate is closing, opening the contact triggers the inversion of movement until the gate is fully open again;
- C2 close back up during opening. When the gate is opening, opening the contact triggers the inversion of movement until the gate is completely closed.
- C3 partial stop. Stopping of the gate, if it is moving, with consequent automatic closing (if the automatic closing function has been entered);
- C4 obstruction wait. Stopping of the gate, if it is moving, which resumes movement once the obstruction is removed.

🕮 If contacts CX and CY are not used they should be deactivated during programming.

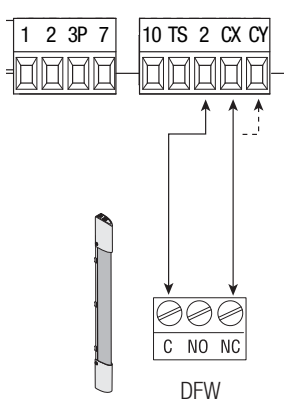


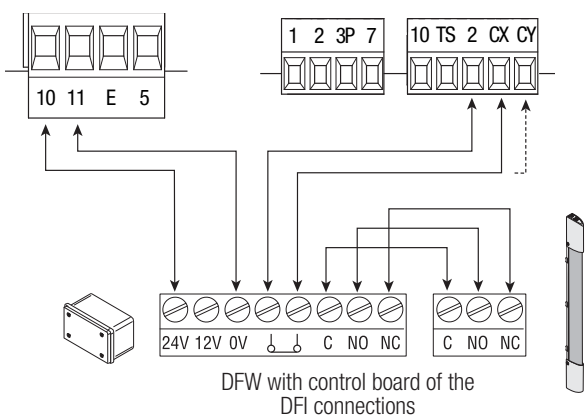


Sensitive Safety Edges

Configure contact CX or CY (NC), safety input for sensitive safety-edges.
See CX input functions (Function F2) or CY (Function F3) in:
- C7 reopening during closing. When the gate is closing, opening the contact triggers the inversion of movement until the gate is fully open again;
- C8 reclosing during opening. When the gate is opening, opening the contact triggers the inversion of movement until the gate is fully closed.

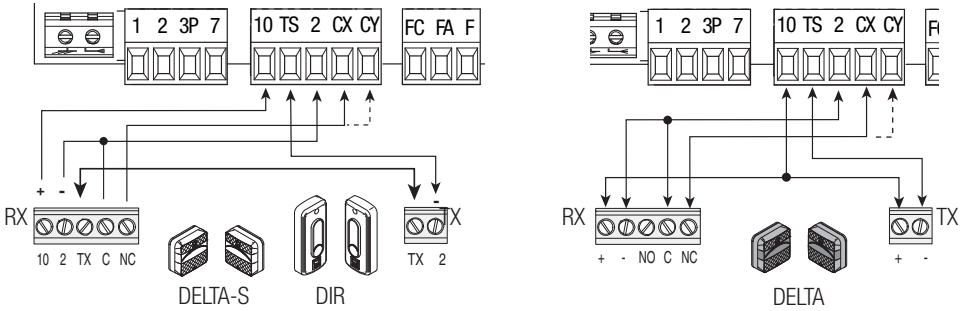
🕮 If contacts CX and CY are not used they should be deactivated during programming.





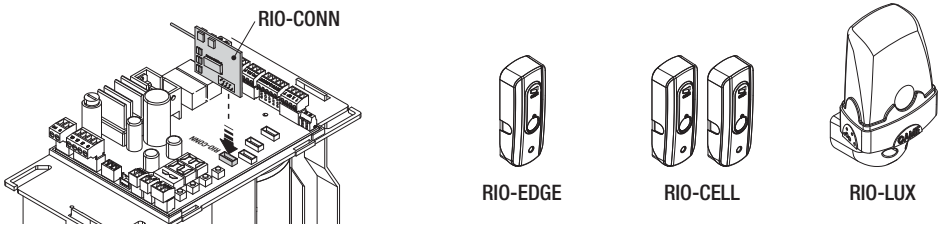
Connecting the safety devices (i.e. the safety test)

At each opening and closing command, the control board checks the efficacy of the safety devices (such as, photocells).
Any malfunction inhibits any command and is signaled on display E4.
Enable function F5 in programming.



RIO WIRELESS DEVICES

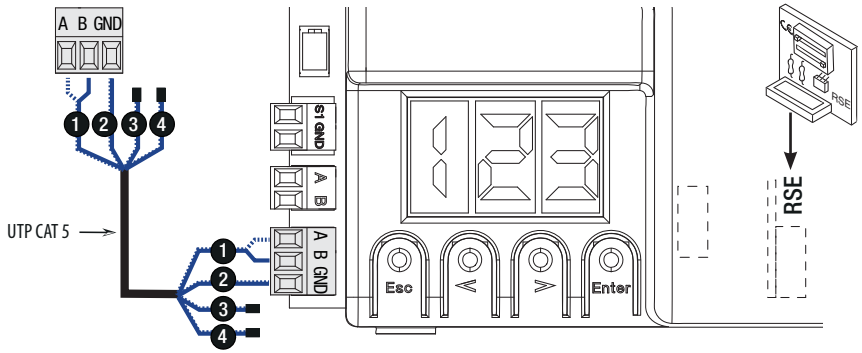
Fit the RIO-CONN card into the corresponding connector on the control board.
Set the function to be associated to the wireless device (F65, F66, F67 e F68).
Configure the RIO-EDGE, RIO-CELL and RIO-LUX wireless devices by following the indications shown in the folder enclosed with each accessory.
📖 If the devices are not configured with the RIO-CONN card, the E18 error message appears on the display.
⚠ If there are any radio-frequency disturbances to the system, the wireless system will inhibit the normal operation of the operator, and this error will show up on the display as E17.



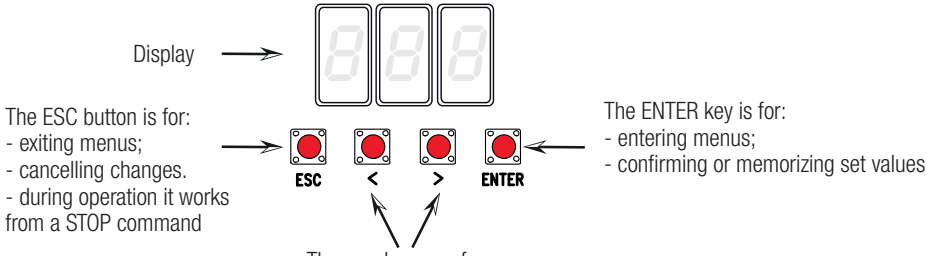
CONNECTION FOR PAIRED OPERATION AND FOR CRP (CAME REMOTE PROTOCOL)

See the PAIRED CONNECTION WITH SINGLE CONTROL chapter.

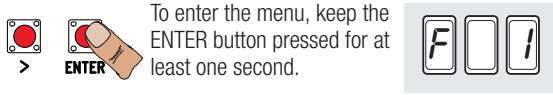
Fit the RSE card.



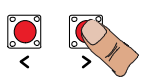
DESCRIPTION OF PROGRAMMING COMMANDS



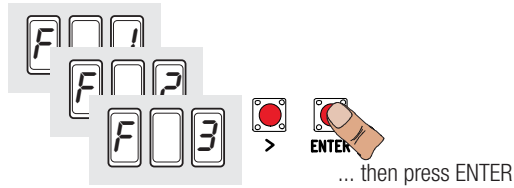
BROWSING THE MENU



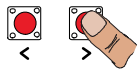
To enter the menu, keep the ENTER button pressed for at least one second.



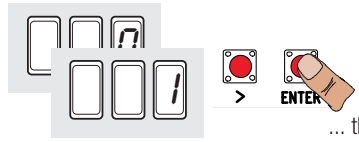
To select menu items, use the arrow keys ...



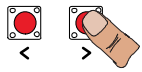
... then press ENTER



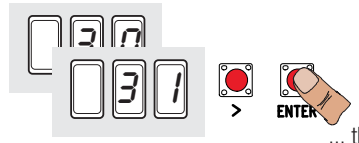
also for the submenus, use the arrow keys to select ...



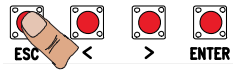
... then press ENTER



To increase or decrease a value, use the arrow keys ...



... the press ENTER to confirm ...



... to exit the menu, wait 10 seconds or press ESC.

📖 When the menu is active, the system cannot be used.

FUNCTIONS MAP

F 1 Total stop function (1-2)
F 2 Function associated to input 2-CX
F 3 Function associated to input 2-CY
F 5 Safety test function
F 6 Maintained action function
F 7 Control mode on 2-7
F 8 Control mode on 2-3P
F 9 Obstruction detection with motor idle function
F 10 Function associated to the gate-open signaling output
F 11 Encoder exclusion
F 12 Slowed-down start function
F 14 Sensor type selection function
F 18 Additional light function
F 19 Automatic closing time
F 20 Automatic closing time after partial opening
F 21 Preflashing time
F 28 Adjusting opening speed
F 30 Adjusting opening slow-down speed
F 34 Sensitivity during movement
F 35 Sensitivity during slow-down
F 36 Adjusting partial opening
F 37 Adjusting the gearmotor's opening slow-down starting point
F 38 Adjusting the gearmotor's closing slow-down starting point
F 49 Managing the serial connection
F 50 Saving data in memory roll
F 51 Reading memory roll data
F 52 Transferring parameters from Master to Slave
F 54 Opening direction
F 56 Peripheral number
F 63 Changing COM speed
F 65 Function associated to the RIO-EDGE [T1] input
F 66 Function associated to the RIO-EDGE [T2] input
F 67 Function associated to the RIO-CELL [T1] input
F 68 Function associated to the RIO-CELL [T2] input
F 71 Partial opening time

U 1 Entering new user with an associated command
U 2 Deleting single users
U 3 Deleting all users

A 1 Motor-type setting
A 3 Travel calibration
A 4 Resetting parameters
A 5 Counting maneuvers
A 6 Adjusting the motor torque

H 1 Software version

FUNCTIONS MENU

📖 **IMPORTANT! Start programming by first performing the following: MOTOR-TYPE SETTING (A1), OPENING DIRECTION (F54), TOTAL STOP (F1) and TRAVEL CALIBRATION (A3)**

⚠ **Programming the features is to be done when the operator is stopped.**

📖 **You can memorize up to 25 maximum users.**

F1 Total stop [1-2]	OFF = Deactivated (**default**) / ON = Activated
NC input – Gate stop that excludes any automatic closing; to resume movement, use the control device. The safety device is inserted into [1-2].	
F2 Input [2-CX]	OFF = Deactivated (**default**) / C1 / C2 / C3 / C4 / C7 / C8
NC input – Can associate: C1 = reopening during closing by photocells, C2 = reclosing during opening by photocells, C3 = partial stop, C4 = obstruction wait, C7 = reopening during closing by sensitive safety-edges, C8 = reclosing during opening by sensitive safety-edges.	
F3 Input [2-CY]	OFF = Deactivated (**default**) / C1 / C2 / C3 / C4 / C7 / C8
NC input – Can associate: C1 = reopening during closing by photocells, C2 = reclosing during opening by photocells, C3 = partial stop, C4 = obstruction wait, C7 = reopening during closing by sensitive safety-edges, C8 = reclosing during opening by sensitive safety-edges.	
F5 Safety test	0 = Deactivated (**default**) / 1 = CX / 2 = CY / 4 = CX+CY
After every opening or closing command, the board will check whether the photocells are working properly. 📖 The safety test is always active for wireless devices.	
F6 Maintained action	OFF = Deactivated (**default**) / ON = Activated
The gate opens and closes by keeping the button pressed. Opening button on contact 2-3P and closing button on contact 2-7. All other control devices, even radio-based ones, are excluded.	
F7 Command [2-7]	0 = Step-step (**default**) / 1 = Sequential / 2 = Open / 3 = Close
From the control device connected to 2-7, it performs the (open-close-invert) step-step, (open-stop-close-stop), sequential, open or close command.	
F8 Command [2-3P]	1 = Partial opening / 2 = Open
From the control device connected to 2-3P, it performs a partial (1) or total opening (2) of the gate. 📖 The partial opening time is adjusted on function F 71.	
F9 Obstruction detection with motor idle	OFF = Deactivated (**default**) / ON = Activated
With the gate closed, opened or totally stopped, the gearmotor stays idle if the safety devices, that is, photocells or sensitive safety-edges detect an obstruction.	
F10 Gate-open signal output	0 = lit when gate is open or moving (**default**) / 1 = when opening it flashes intermittently every half-second, when closing it flashes intermittently every second, stays lit when gate is open is off when gate is closed
It signals the gate status. The signal device is connected to contact 10-5.	
F11 Encoder	OFF = Deactivated / ON = Activated (**default**)
Managing slow-downs, obstruction detections and sensitivity.	

F12 Slowed-down departure	OFF = Deactivated (**default**) / ON = Activated
With each opening and closing command, the gate starts moving slowly for a few seconds.	
F14 Sensor type selection	0 = command with transponder sensor or magnetic card reader / 1 = for control with the keypad selector (**default**).
Setting the type of accessory for controlling the operator.	
F18 Additional light	0 = Flashing light (**default**) / 1 = Cycle
Output on contact 10-E. Flashing light: it flashes during the gate's opening and closing phases. Cycle: outdoor lamp for extra lighting in the driveway. It stays lit from when the gate starts opening to when it closes, including the waiting time prior to automatic closing (only with with TCA activated).	
F19 Automatic closing time	OFF = Deactivated (**default**) / 1 = 1 second / ... / 180 = 180 seconds
The automatic-closing wait starts when the opening limit switch point is reached and can be set to between 1 and 180 seconds. The automatic closing does not activate if any of the safety devices trigger when an obstruction is detected, or after a total stop, or during a power outage.	
F20 Automatic closing time after a partial opening	OFF = Deactivated / 1 = 1 second / … / 10 = seconds (**default**) / … / 180 = 180 seconds
The wait before the automatic closing starts after a partial opening command for an adjustable time of between 1 s and 180 s. The automatic closing does not activate if any of the safety devices trigger when an obstruction is detected, or after a total stop, or during a power outage. 📖 The F19 function must not be activated.	
F21 Preflashing time	OFF = Deactivated (**default**) / 1 = 1 second / … / 10 = 10 seconds
Adjusting the pre-flashing time for the flashing light connected to 10-E before each maneuver. The flashing time is adjustable from one to ten seconds.	
F28 Travel speed	60 = Minimum speed / … / 100 = Maximum speed (**default**)
Setting the gate's opening and closing speeds, calculated as a percentage.	
F30 Slow-down speed	10 = Minimum speed / … / 50 = Maximum speed (**default**)
Setting the gate's opening and closing slow-down speed, calculated as a percentage.	
F34 Travel sensitivity	10 = maximum sensitivity / … / 100 = minimum sensitivity (**default**)
Adjusting obstruction detection sensitivity during gate travel.	
F35 Slow-down sensitivity	10 = maximum sensitivity / … / 100 = minimum sensitivity (**default**)
Adjusting obstruction detection sensitivity during slow-down.	
F36 Adjusting partial opening	10 = 10% of the gate travel (**default**) / … / 80 = 80% of the gate travel
Adjustment as a percentage of total travel, during gate opening. 📖 This function appears only is the Encoder function is activated.	

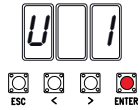
F37 Opening slow-down point	10 = 10% of the travel / … / 25 = 25% of the travel (**default**) / … / 60 = 60% of the travel
Percentage adjustment of the total gate travel, of the opening slow-down starting point. 🕮 This function appears only is the Encoder function is activated.	
F38 Closing slow-down point	10 = 10% of the travel / … / 25 = 25% of the travel (**default**) / … / 60 = 60% of the travel
Percentage adjustment of the total gate travel, from the closing slow-down starting point. 🕮 This function appears only is the Encoder function is activated.	
F49 Managing serial connection	OFF = Deactivated (**default**) / 1 = Paired / 3 = CRP
To enable paired operation or the Came Remote Protocol.	
F50 Save data	OFF = Deactivated (**default**) / ON = Activated
Saving users and saved settings in memory roll. 🕮 This feature only appears if a memory roll has been fitted into the control board.	
F51 Read data	OFF = Deactivated (**default**) / ON = Activated
Uploading data saved in memory roll. 🕮 This feature only appears if a memory roll has been fitted into the control board.	
F52 Passing parameter in paired mode	OFF = Deactivated (**default**) / ON = Activated
Uploading settings from Master to Slave. 🕮 This appears only if function F49 is set to Paired.	
F54 Opening direction	OFF = Opens left (default) /**ON** = Opens right
For setting the gate opening direction.	
F56 Peripheral number	1 ----> 255
To set the peripheral's number from 1 to 255 for each control board when you have a system with several operators.	
F63 Change COM speed	0 = 1200 Baud / 1 = 2400 Baud / 2 = 4800 Baud / 3 = 9600 Baud / 4 = 14400 Baud / 5 = 19200 Baud / 6 = 38400 Baud (**default**) / 7 = 57600 Baud / 8 = 115200 Baud
For setting the communication speed used in the CRP (Came Remote Protocol) connection system.	
F65 Wireless input RIO-EDGE [T1]	OFF = Deactivated (**default**) / P0 / P7 / P8
Wireless (RIO-EDGE) safety device associated to a function chosen among those available: P0 = TOTAL STOP, P7 = reopening during closing, P8 = reclosing during opening. For programming, see the instructions that come with the accessory. 🕮 This function only appears is the control board has been fitted with a RIO-CONN card.	
F66 Wireless input RIO-EDGE [T2]	OFF = Deactivated (**default**) / P0 / P7 / P8
Wireless (RIO-EDGE) safety device associated to a function chosen among those available: P0 = TOTAL STOP, P7 = reopening during closing, P8 = reclosing during opening. For programming, see the instructions that come with the accessory. 🕮 This function only appears is the control board has been fitted with a RIO-CONN card.	

F67 Wireless input RIO-CELL [T1]	OFF = Deactivated / P1 (**default**) / P2 / P3 / P4
RIO-CELL is associated to any function chosen among those available: P1 = reopening during closing; P2 = reclosing during opening; P3 = partial stop; P4 = obstruction wait. For programming, see the instructions that come with the accessory. 📖 This function only appears is the control board has been fitted with a RIO-CONN card.	
F68 Wireless input RIO-CELL [T2]	OFF = Deactivated / P1 (**default**) / P2 / P3 / P4
RIO-CELL is associated to any function chosen among those available: P1 = reopening during closing; P2 = reclosing during opening; P3 = partial stop; P4 = obstruction wait. For programming, see the instructions that come with the accessory. 📖 This function only appears is the control board has been fitted with a RIO-CONN card.	
F71 Partial opening time	5 = 5 seconds /..... / 40 = 40 seconds
After an opening command from the button connected to 2-3P, the gate opens for an adjustable time of between five seconds and 40 seconds. 📖 This function only appears if the Encoder function is deactivated.	
U 1 Entering a user	1 = Step-step command (open-close) / 2 = Sequential command (open-stop-close-stop) / 3 = Only open command / 4 = Partial command
Entering up to 250 users and associating to each one a function of choice among those included. This must be done via transmitter or other control device (see "ENTERING USERS WITH ASSOCIATED COMMAND paragraph).	
U 2 Deleting a user	OFF = Disable / on = Activated
Deleting a single user	
U 3 Deleting users	OFF = Deactivated / ON = Delete all users
Deleting all users.	
A 1 Motor type	1 = 400 Kg / 2 = 600 Kg / 3 = 800 Kg / 4 = 1000 Kg
To set the gearmotor depending on the gate's weight.	
A 3 Travel calibration	OFF = Disable / on = Activated
Automatic calibration of the gate-leaf run (see the TRAVEL CALIBRATION paragraph).	
A 4 Resetting parameters	OFF = Disable / on = Activated
Warning! The default settings are restored and the travel calibration deleted.	
A 5 Counting maneuvers	0 = Number or maneuvers executed
For viewing the number of maneuvers made (001 = 100 maneuvers; 010 = 1,000 maneuvers; 100 = 10,000 maneuvers; 999 = 99,900 maneuvers; CSI = maintenance job).	
A 6 Adjusting the motor torque	1 / 2 / 3 / 4 / 5
For adjusting the motor torque from 1 (minimum) to 5 (maximum).	
H 1 Version	
View the firmware version.	

📖 When adding and deleting users, the flashing numbers appearing are those numbers that are available and usable to assign to a new user (max. 250 users).

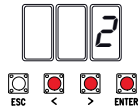
ENTERING A USER WITH AN ASSOCIATED COMMAND

Select U 1
Press ENTER to confirm.

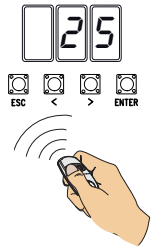


Select a command to associate to the user.
The commands are:
- step-step (open-close) = 1;
- sequential (open-stop-close-stop) = 2;
- open = 3;
- partial opening = 4.

Press ENTER to confirm...

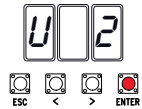


... a number between 1 and 250 will start flashing for a few seconds.
Send the code from the transmitter or other control device, such as, a keypad selector or a transponder.
Associate the number to the added user.

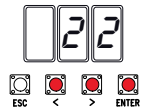


DELETING A SINGLE USER

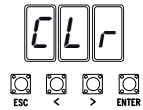
Select U 2. Press ENTER.
Activate the function and press ENTER to confirm



Use the arrow keys select the number of the user you wish to delete.
Press ENTER to confirm...



... Clr will appear on the screen to confirm deletion.



LIST OF REGISTERED USERS

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	

32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
50	
51	
52	
53	
54	
55	
56	
57	
58	
59	
60	
61	
62	

63	
64	
65	
66	
67	
68	
69	
70	
71	
72	
73	
74	
75	
76	
77	
78	
79	
80	
81	
82	
83	
84	
85	
86	
87	
88	
89	
90	
91	
92	
93	
94	

95	
96	
97	
98	
99	
100	
101	
102	
103	
104	
105	
106	
107	
108	
109	
110	
111	
112	
113	
114	
115	
116	
117	
118	
119	
120	
121	
122	
123	
124	
125	
126	

127	
128	
129	
130	
131	
132	
133	
134	
135	
136	
137	
138	
139	
140	
141	
142	
143	
144	
145	
146	
147	
148	
149	
150	
151	
152	
153	
154	
155	
156	
157	
158	

159	
160	
161	
162	
163	
164	
165	
166	
167	
168	
169	
170	
171	
172	
173	
174	
175	
176	
177	
178	
179	
180	
181	
182	
183	
184	
185	
186	
187	
188	
189	
190	

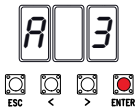
191	
192	
193	
194	
195	
196	
197	
198	
199	
200	
201	
202	
203	
204	
205	
206	
207	
208	
209	
210	
211	
212	
213	
214	
215	
216	
217	
218	
219	
220	
221	
222	

223	
224	
225	
226	
227	
228	
229	
230	
231	
232	
233	
234	
235	
236	
237	
238	
239	
240	
241	
242	
243	
244	
245	
246	
247	
248	
249	
250	

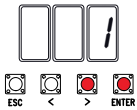
TRAVEL CALIBRATION

📖 Before calibrating the gate travel, position the gate half-way, check that the maneuvering area is clear of any obstruction and check that there are mechanical opening and closing stops.
⚠ The mechanical end-stops are obligatory.
Important! When calibrating, all safety devices will be disabled excluding the one for TOTAL STOP which is active on on the ESC button.

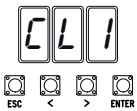
Select A 3.
Press ENTER to confirm.

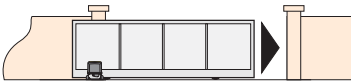


Select 1 and press ENTER to confirm the travel calibration operation.

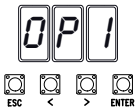


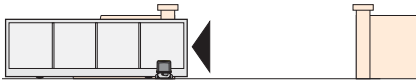
The gate will perform a closing maneuver until it reaches a final stop...





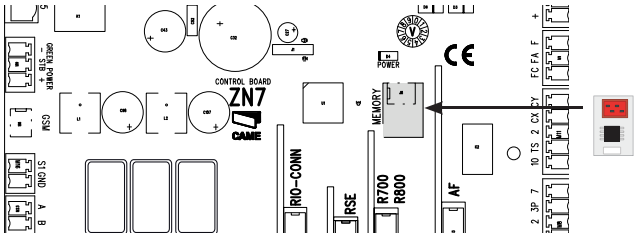
...then the gate will perform an opening maneuver until it reaches a final stop.





MEMORY ROLL CARD

To memorize user data and configure the system, to then reuse them with another control board even on another system.
📖 After memorizing the data, it is best to remove the memory roll.



PAIRED CONNECTION

🕮Important! Start by performing the following procedures on both operators:
- fit the RSE card (with the DIP-switches set to OFF) on the connector of both operator's cards.
- connect the two circuit cards with a CAT 5-type cable (max. 1,000 m) onto terminals A-A / B-B / GND-GND.
- connect all of the control and safety devices on the MASTER operator's control panel.

🕮Important! All functions settings must be done on the MASTER control panel.

Configuring the MASTER operator

Select function F 49. Press ENTER to confirm.
Select 1 (paired) and press ENTER.
Perform settings and adjustments on the control board.

Transferring parameters from MASTER to SLAVE

Select function F 52 on the MASTER control panel.
Select 1 and press ENTER.

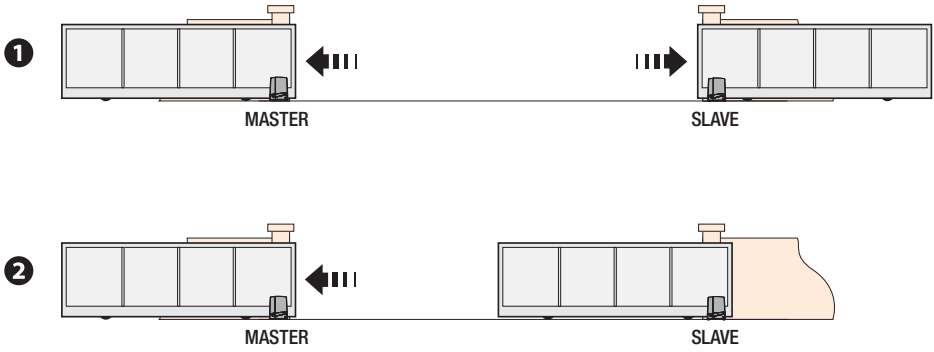
Programming

On both operators, set the following functions:
- the type of motor (A1);
- the opening direction (F54);
- total stop (F1);
- travel calibration (A3).

Proceed with the settings and adjustments on the MASTER control board.

Operating modes

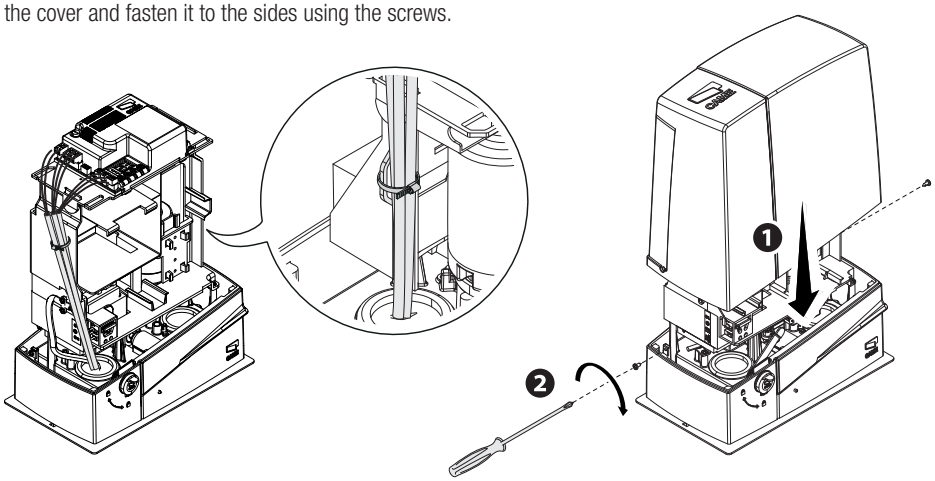
❶ Either STEP-STEP or ONLY OPEN command. Both leaves open.
❷PARTIAL/PEDESTRIAN OPENING command. Only the MASTER operator's leaf opens.
For the types of command that can be selected and paired to users, see the ENTERING USERS WITH ASSOCIATED COMMANDS.



FINAL OPERATIONS

Once the electrical connections are done and the set up is finished, fasten the cables to the gearmotor jumper using a cable tie.

Fit the cover and fasten it to the sides using the screws.



ERROR MESSAGE

The error messages are shown on the display.

E 1	The travel calibration was interrupted when the STOP button was activated
E 2	Calibrating the complete gate-travel
E 3	Encoder broken
E 4	Services test error
E 7	Insufficient working time
E 9	Closing obstruction
E 10	Opening obstruction
E 11	Maximum number of detected obstructions
E 13	The NC contacts are open (for example, the limit-switches)
E 14	Serial communication error
E 17	Wireless system error
E 18	The wireless system configuration is missing

TROUBLESHOOTING

ISSUES	POSSIBLE CAUSES	FIXES
It neither opens nor closes	• Power supply is missing • The gearmotor is stuck • The transmitter doesn't work • The transmitter is broken • The stop button is either stuck or broken • The opening/closing button or the key-switch selector is stuck • The wireless accessory does not work	• Check main power supply • Lock the gearmotor • Replace the batteries • Call for assistance • Call for assistance • Call for assistance • Call for assistance
The gate opens but does not close	• The photocells are dirty	• Clean and check proper functioning of the photocells

DISMANTLING AND DISPOSAL

☞ CAME CANCELLI AUTOMATICI S.p.A. applies a certified Environmental Management System at its premises, which is compliant with the UNI EN ISO 14001 standard to ensure the environment is safeguarded.
Please continue safeguarding the environment. At CAME we consider it one of the fundamentals of our operating and market strategies. Simply follow these brief disposal guidelines:

⚽ DISPOSING OF THE PACKAGING

The packaging materials (cardboard, plastic, and so on) should be disposed of as solid household waste, and simply separated from other waste for recycling.
Always make sure you comply with local laws before dismantling and disposing of the product.
DISPOSE OF RESPONSIBLY!

⚽ DISMANTLING AND DISPOSAL

Our products are made of various materials. Most of these (aluminum, plastic, iron, electrical cables) are classified as solid household waste. They can be recycled by separating them before dumping at authorized city plants.
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.
Before disposing, it is always advisable to check with the specific laws that apply in your area.
DISPOSE OF RESPONSIBLY!

CAME

CAME.COM

CAME S.P.A.
Via Martiri Della Libertà, 15
31030 Dosson di Casier - Treviso - Italy
tel. (+39) 0422 4940 - fax. (+39) 0422 4941

*Manual **FA00014-EN** - v. **7** - 07/2017 - © CAME S.p.A. "Translated original instructions"*