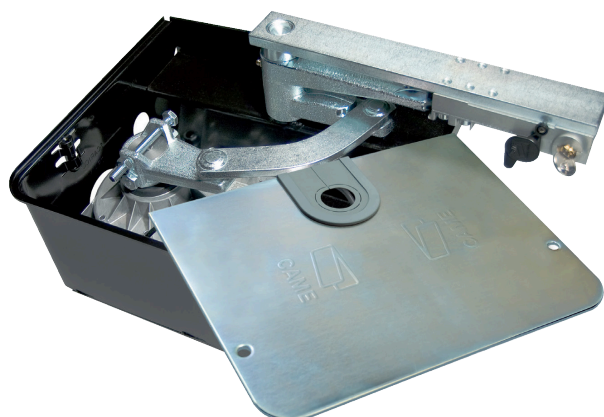


# Swing-gate operator FROG

FA01302-EN



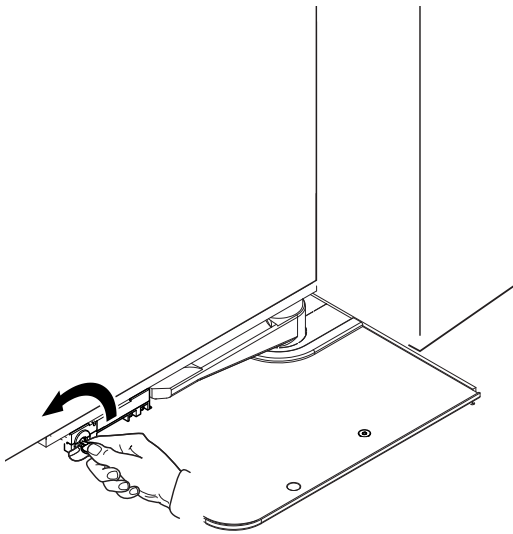
**FROG-A24**

**FROG-A24E**

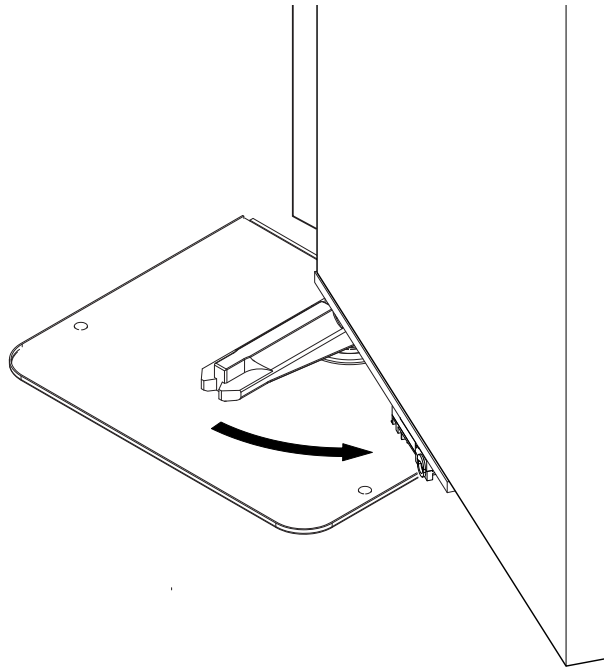
INSTALLATION MANUAL



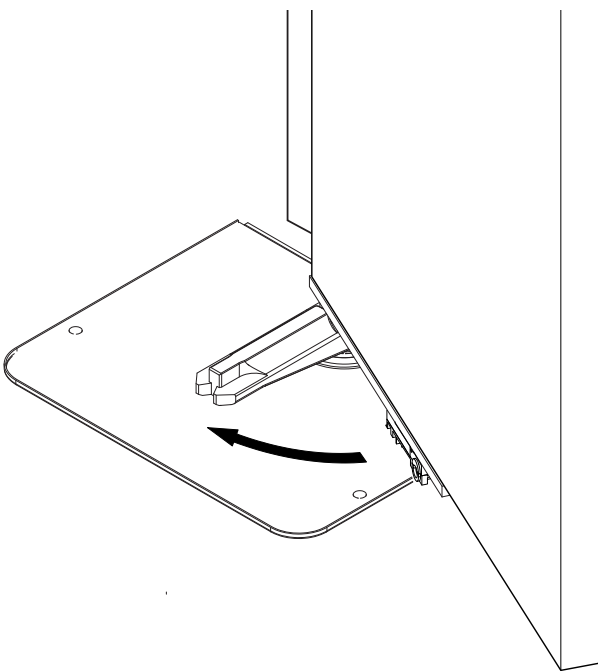
1



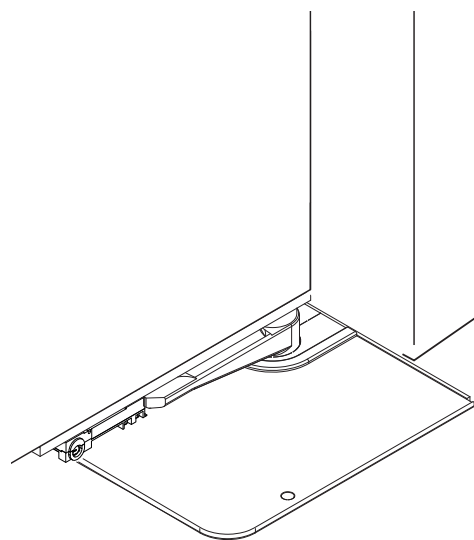
2



1



2



### **⚠ Important safety instructions.**

**⚠ Follow all of these instructions. Improper installation can cause serious bodily harm.**

**⚠ Before continuing, also read the general precautions for users.**

Use this product only for its specifically intended use. Any other use is hazardous.

The manufacturer can not be held liable for any damage caused by improper, unreasonable, and erroneous use.

This manual's product is defined by the Machinery Directive 2006/42/CE as partly-completed machinery.

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 the Machinery Directive 2006/42/EC.

The final installation must comply with the Machinery Directive 2006/42/EC and the current European reference standards.

The manufacturer declines any liability for using non-original products; which would result in warranty loss.

All operations indicated in this manual must be carried out exclusively by skilled and qualified personnel and in full compliance with current regulations.

Laying of cables, installation and testing must follow state-of-the-art procedures as dictated by applicable standards and laws.

Make sure the mains power supply is disconnected during all installation procedures.

Check that the temperature ranges given and those of the location match.

The appliance must be powered with a voltage corresponding to the value shown on the rating plate. Power must be supplied through a very low safety voltage system.

If necessary, add suitable reinforcements to the anchoring points. If necessary, add suitable reinforcements to the anchoring points.

Make sure that the operator, in the installation place, does not get wet by direct jets of water (sprinklers, water cleaners, etc.).

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.

Demarcate properly the entire site to prevent unauthorized personnel to enter; especially children and minors.

In case of manual handling, have one person for every 20 kg that need hoisting; for non manual handling use proper hoisting equipment in safe conditions.

Use suitable protections to prevent any mechanical hazards due to persons loitering within the operating range of the operator.

The electric cables must pass through special pipes, ducts and cable glands in order to guarantee adequate protection against mechanical damage.

The electrical cables must not touch any parts that may overheat during use (such as the motor and the transformer).

Before the installation, check that the guided part is in good mechanical condition, and that it opens and closes correctly.

The product cannot automate any guided part that includes a pedestrian gate, unless the latter can be enabled only when the pedestrian gate is secured.

Make sure that people cannot be entrapped between the guided and fixed parts, when the guided part is set in motion.

All fixed controls must be clearly visible after installation, in position that the guided part is directly visible, but far away from moving parts. In the case of a maintained action command, this must be installed at a minimum height of 1.5 m from the ground and must not be accessible to the public.

If not already present, apply a permanent tag, that describes how to use the manual release mechanism, close to the mechanism.

Make sure that the operator has been properly adjusted and that the safety and protection devices, and the manual release, are working properly.

Before turning over to the final user, check that the system complies with the harmonized standards and the essential requisites of Machinery Directive 2006/42/CE.

Any residual risks must be indicated clearly with proper signage affixed in visible areas. All of which must be explained to end users.

Fit, in plain sight, the machine's ID plate when the installation is complete.

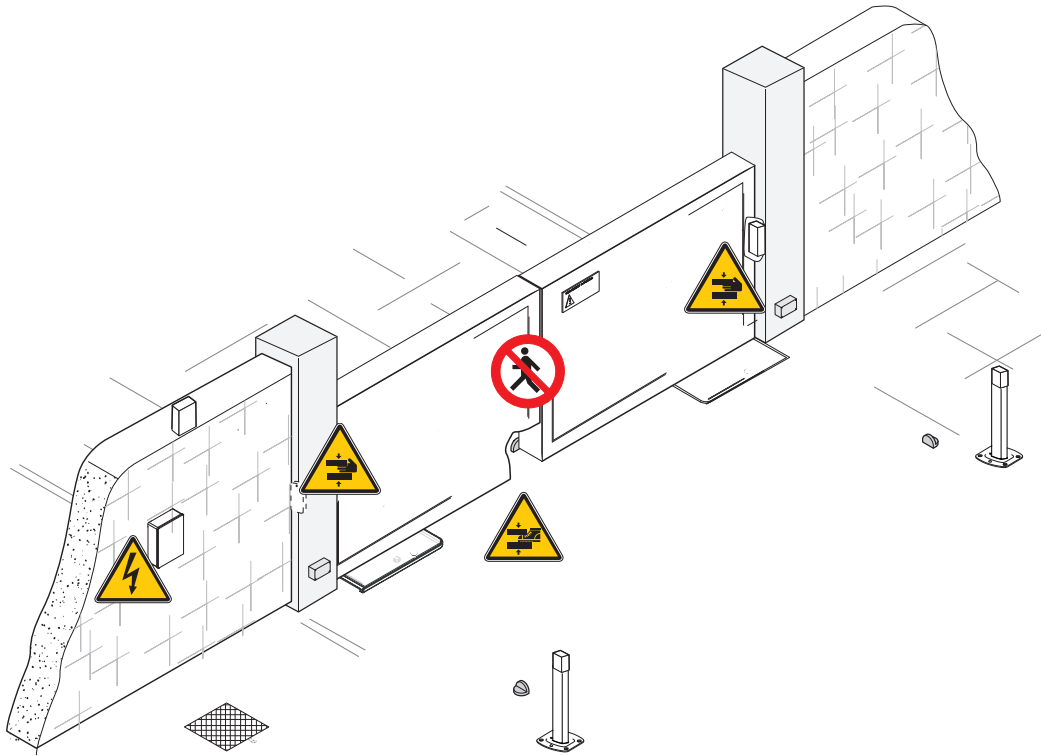
If the power-supply cable is damaged, it must be immediately replaced by the manufacturer or by an authorized technical assistance center, or in any case, by qualified staff, to prevent any risk.

Keep this manual inside the technical folder along with the manuals of all the other devices used for your automation system.

Remember to hand over to the end users all the operating manuals of the products that make up the final machinery.

### Main points of danger for people

---







 Do not transit through during maneuvering.

 Danger of entrapment.

 Danger of hand entrapment.

 Danger of foot entrapment.

**Legend**

-  This symbol shows which parts to read carefully.
-  This symbol shows which parts describe safety issues
-  This symbol shows which parts to tell users about.
-  The measurements, unless otherwise stated, are in millimeters.

**Description**

Irreversible geared-motor for swing gates up to 3.5 m in length per leaf, with adjustable leaf-closing.  
Irreversible geared-motor for swing gates up to 3.5 m in length per leaf, with adjustable leaf-closing.

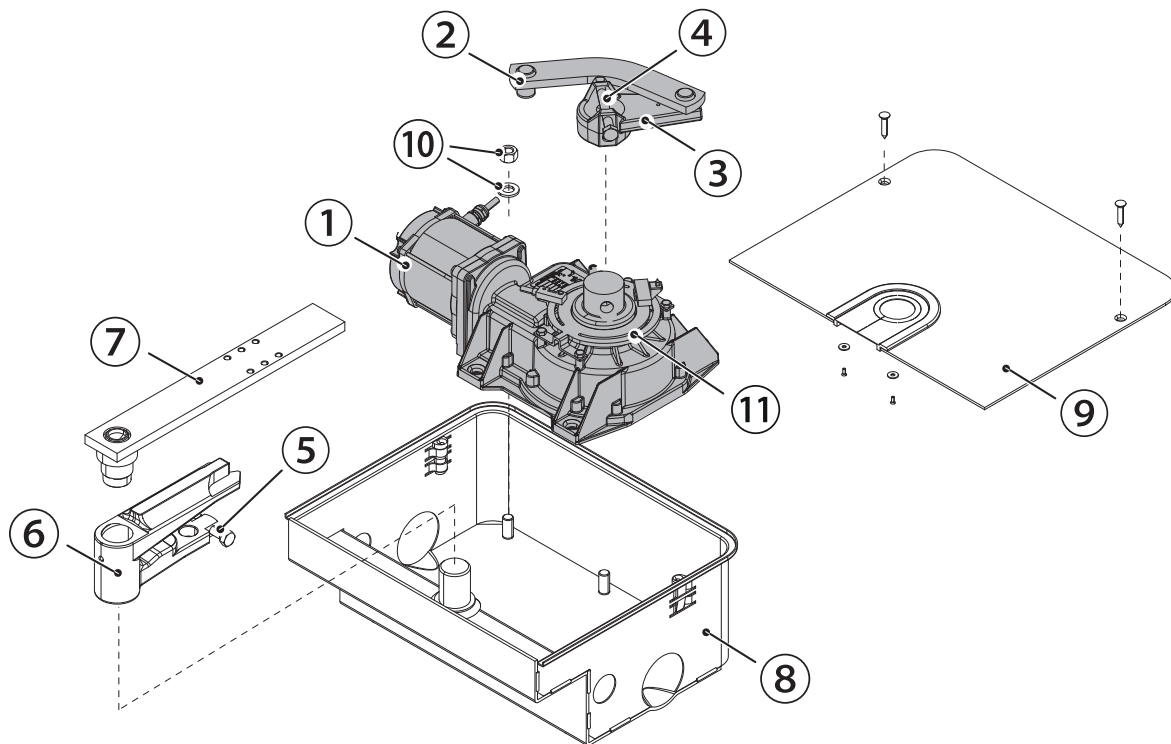
**Intended use**

Ideal below-ground solution for applying to residential and apartment-block gates

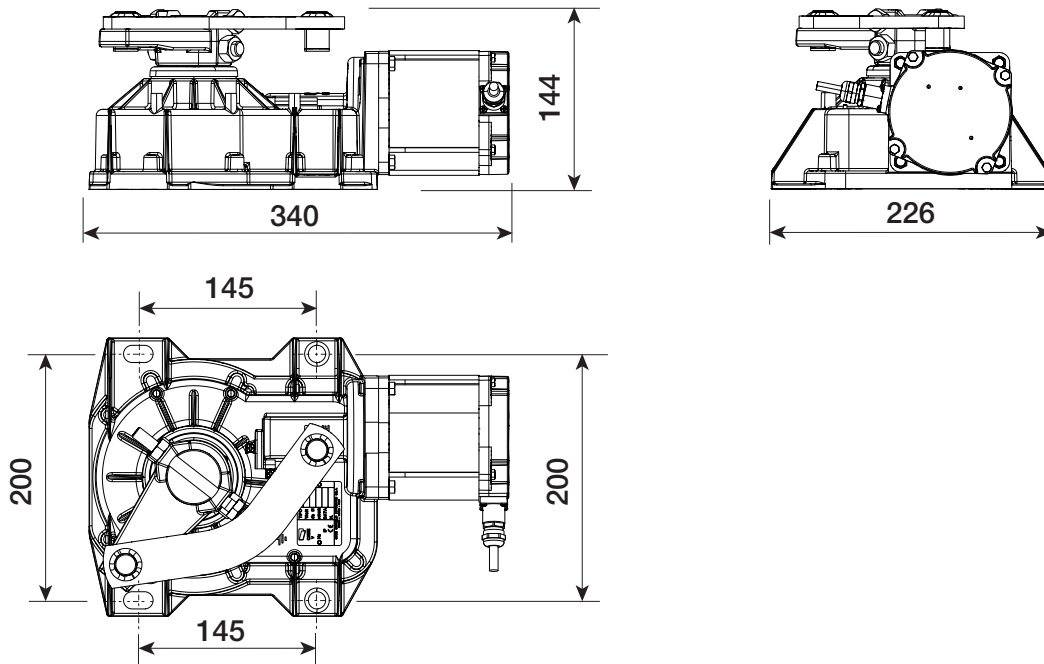
 Any installation and/or use other than that specified in this manual is forbidden.

**Description of parts**

- |  |                                      |
|--|--------------------------------------|
| 1 - Gearmotor  | 7 - Brace for fastening to gate      |
| 2 - Movement transmission lever                        | 8 - Foundation box                   |
| 3 - Gearmotor arm                                      | 9 - Cover                            |
| 4 - Screw for adjusting the closing limit-switch point | 10 - Fastening hardware              |
| 5 - Screw for adjusting the opening limit-switch point | 11 - Slow-down magnetic limit switch |
| 6 - Lever for hooking the release unit                 |                                      |



## Dimensions



## Limits to use

⚠ It is always advisable to install an electric lock, to ensure reliable closure of the gate.  
The installation of an electric lock is mandatory in the case of irreversible gearmotors and with gate leaves longer than 2.5 m.

MODELS	FROG-A24				FROG-A24E		
Gate-leaf length (m)	3.5	2.5	2	-	3.5	2.5	2
Gate-leaf weight (Kg)	*400	*600	800	-	*400	*600	800

## Technical data

MODELS	FROG-A24	FROG-A24E
Motor power supply (V)	24 DC	24 DC
Power (W)	180	180
Current draw (mA)	15 Max.	15 Max.
Working temperature (°C)	-20 ÷ +55	-20 ÷ +55
Opening time at 90° (s)	ADJUSTABLE	ADJUSTABLE
Duty cycle (%)	HEAVY-DUTY SERVICE	HEAVY-DUTY SERVICE
Protection rating (IP)	67	67

## Cable types and minimum thicknesses

Cable length (m)	up to 20	from 20 to 30
Motor power supply 24 V DC	2G x 1.5 mm <sup>2</sup>	2G x 2.5 mm <sup>2</sup>
Micro limit-switches	* no. x 0.5 mm <sup>2</sup>	* no. x 0.5 mm <sup>2</sup>

\*no. = see product mounting instructions - Warning: the cable section is merely indicative as it depends on the motor power and cable length.

📖 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).

📖 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

📖 To connect the Encoder, use a FROHE 300/500 V shielded cable (3x 0.5mm<sup>2</sup>).

## INSTALLATION

 The following illustrations are just examples, as the space available for fitting the operator and accessories varies depending on the area where it is installed.

 The drawings refer to the right-side gearmotor.

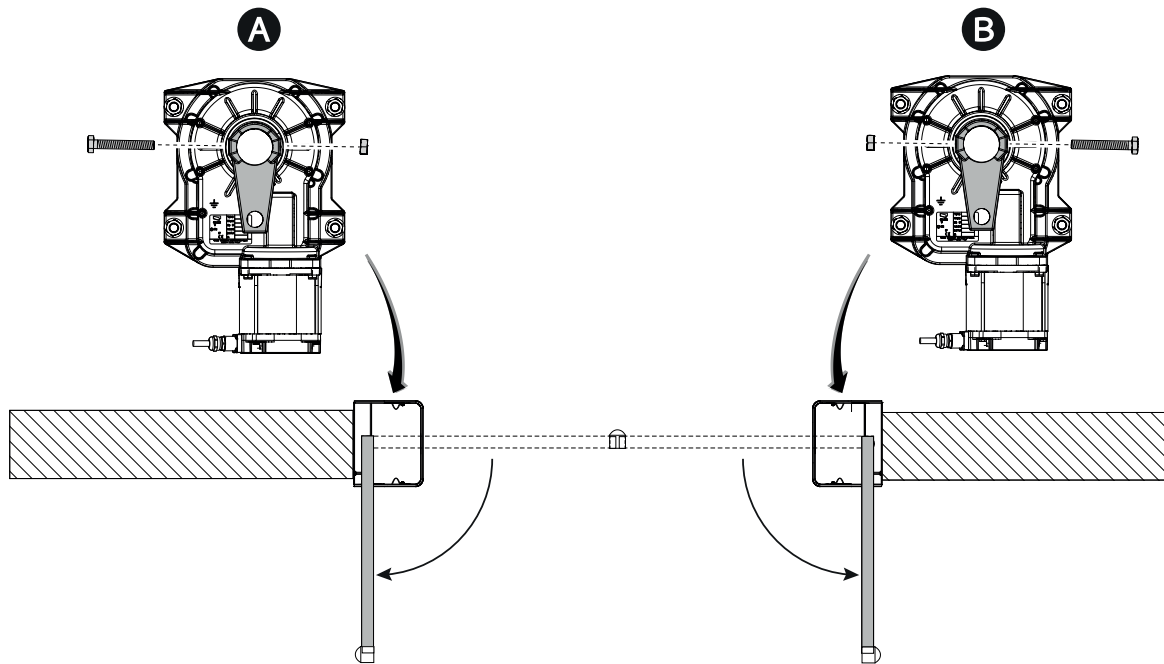
### Preliminary operations

 The preliminary operations for installation concern the foundation box installation and the release devices fastening. Refer to the installation manuals for these products.

### Setting up the gearmotor

Insert the closing limit-switch point adjustment screw into the gearmotor arm.

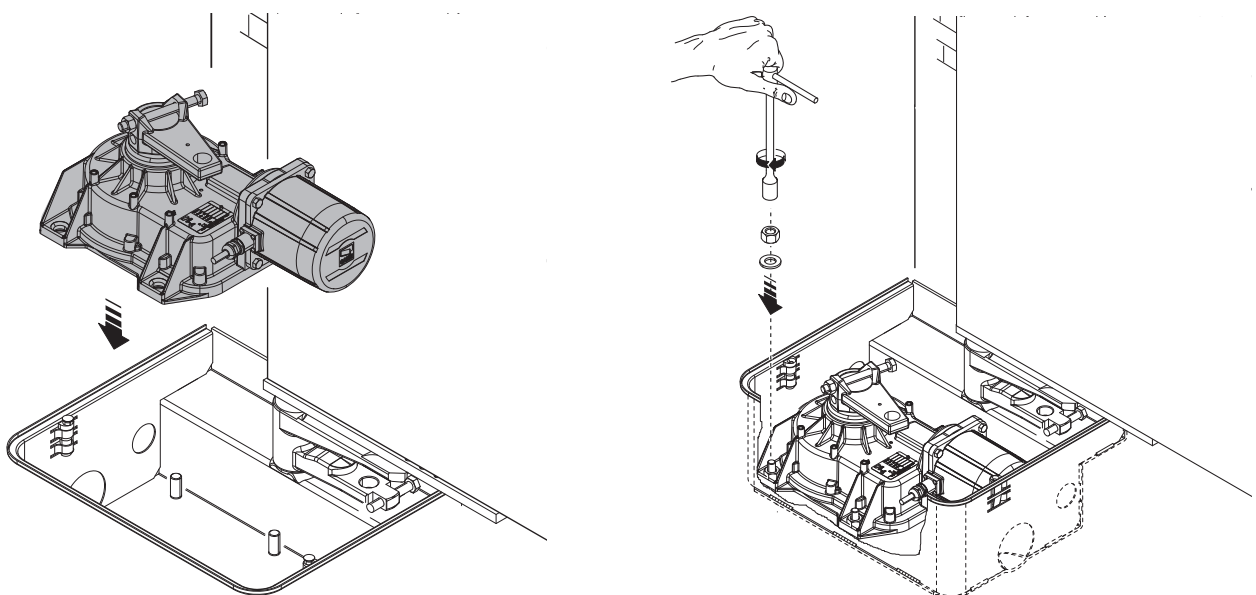
- A** Gearmotor installed on the left
- B** Gearmotor installed on the right



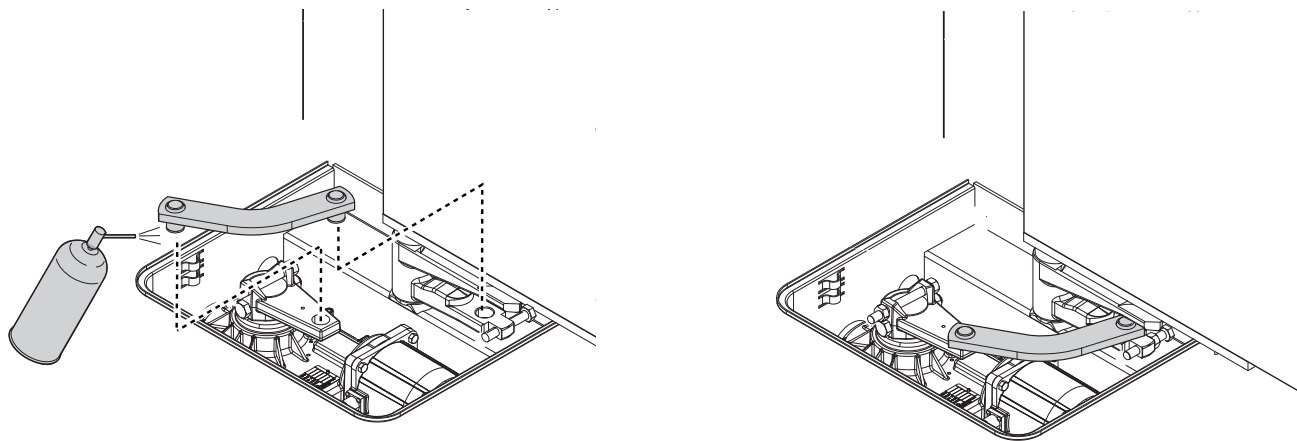
### Fastening the gearmotor

Manually open the leaf.

Position the gearmotor over the threaded pins of the casing and fasten it.



Lubricate the transmission lever.  
Fit the transmission lever as shown in the drawings.



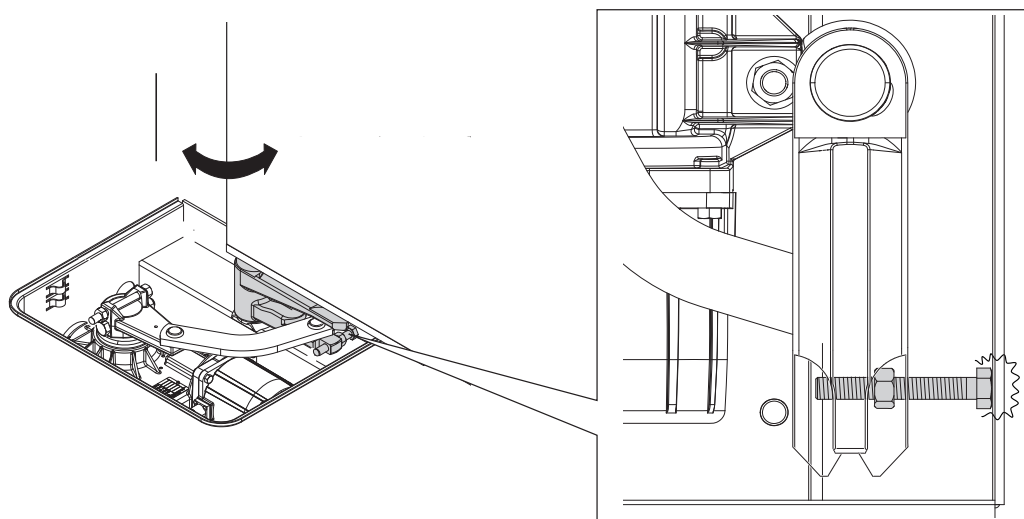
### Establishing the travel end points with mechanical limit-switches

Manually open the leaf to the desired point.

 The leaf maximum opening is 110°.

Unscrew the opening limit-switch point adjustment screw until it touches the foundation box.

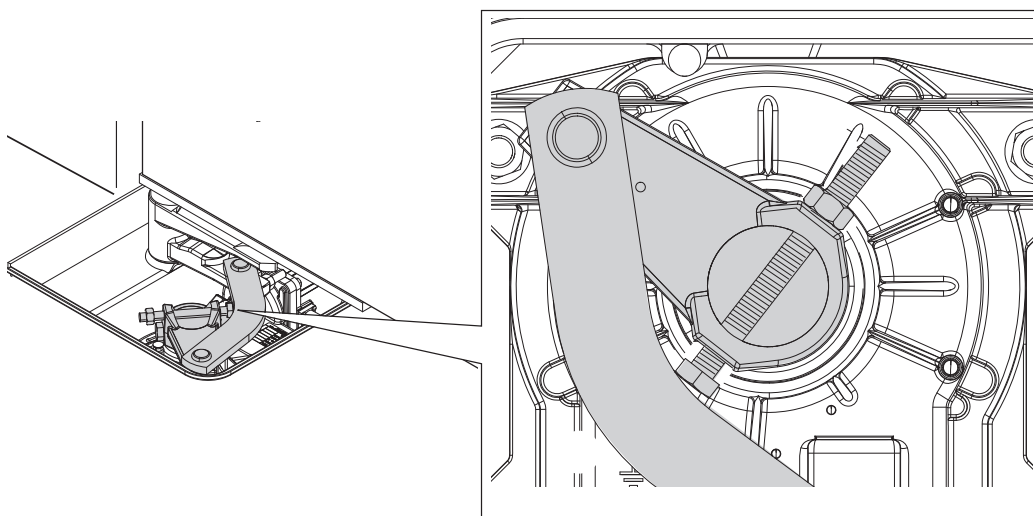
Tighten the nut to lock the screw into position.



Manually close the gate leaf.

Loosen the adjusting screw of the closing limit-switch point until it touches the transmission lever.

Tighten the nut to lock the screw into position.



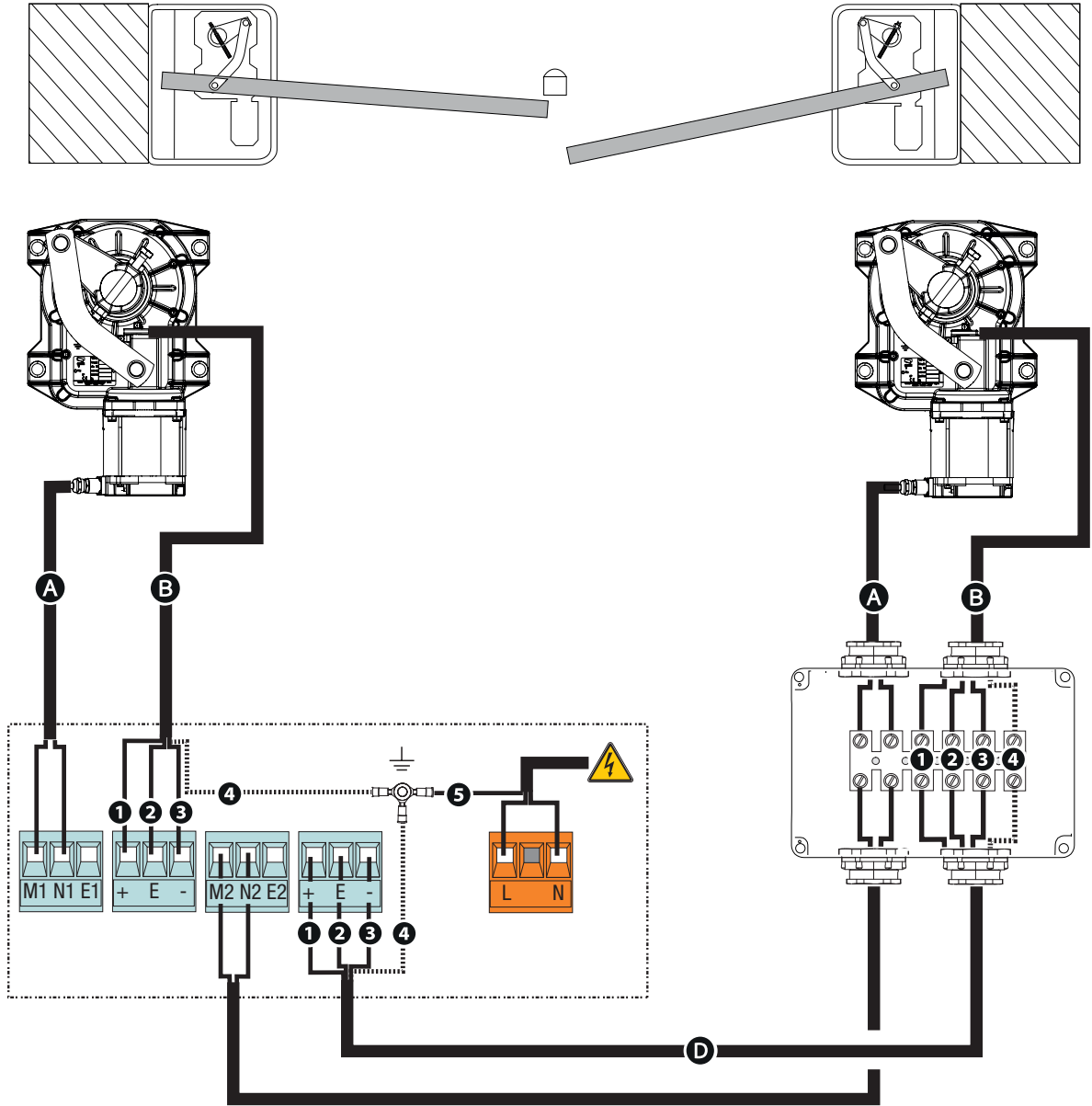


## ELECTRICAL CONNECTIONS

⚠ Before working on the control panel, cut off the mains power supply and remove the batteries, if any.

### Gear motor with Encoder

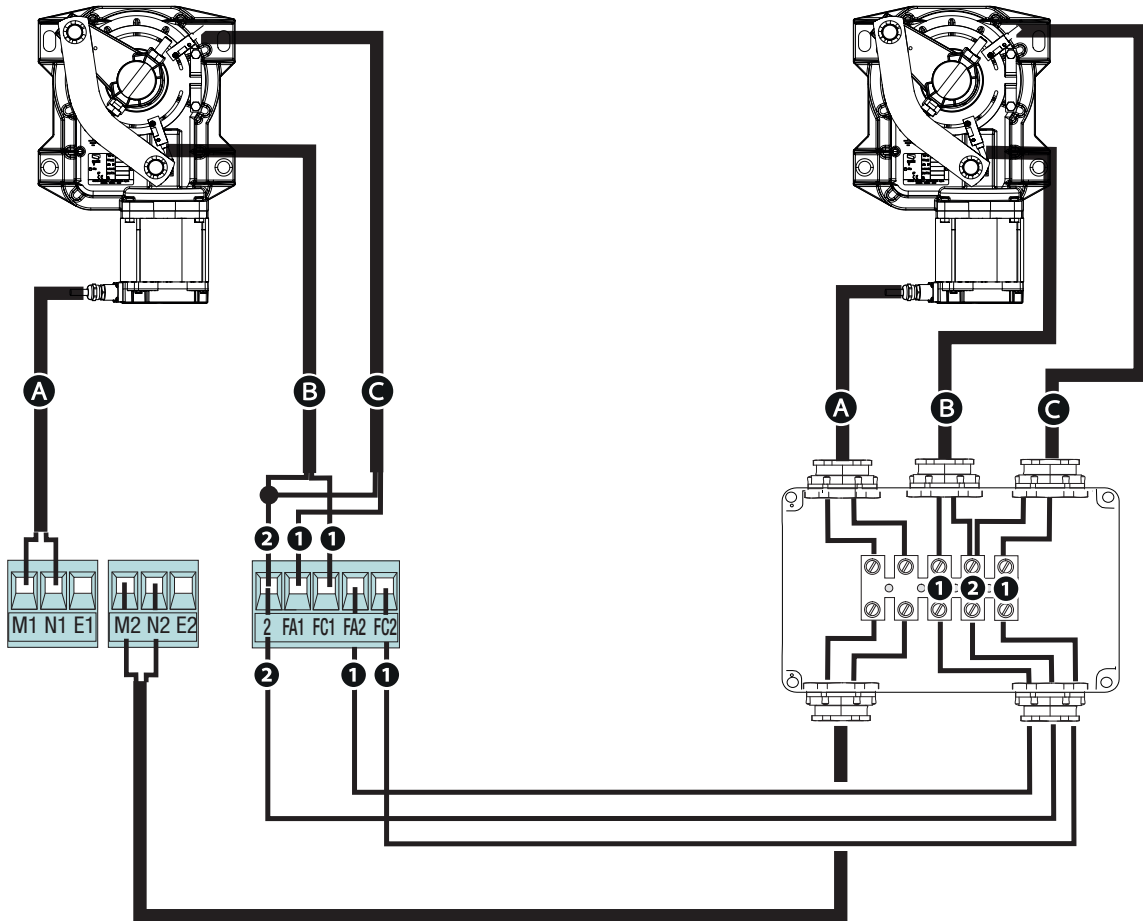
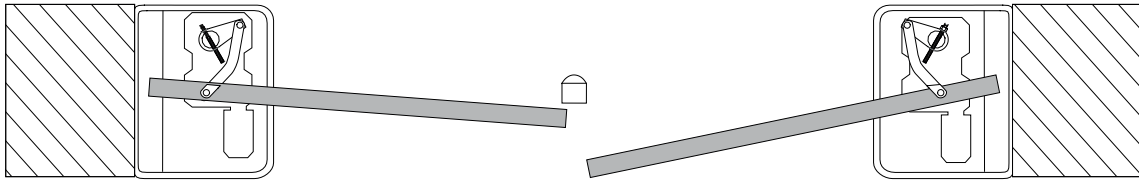
- ① White cable
  - ② Brown cable
  - ③ Green cable
  - ④ Earthing braid
  - ⑤ Yellow-green cable
- A Power supply cable
  - B Encoder cable
  - D 801XA-0010 cable

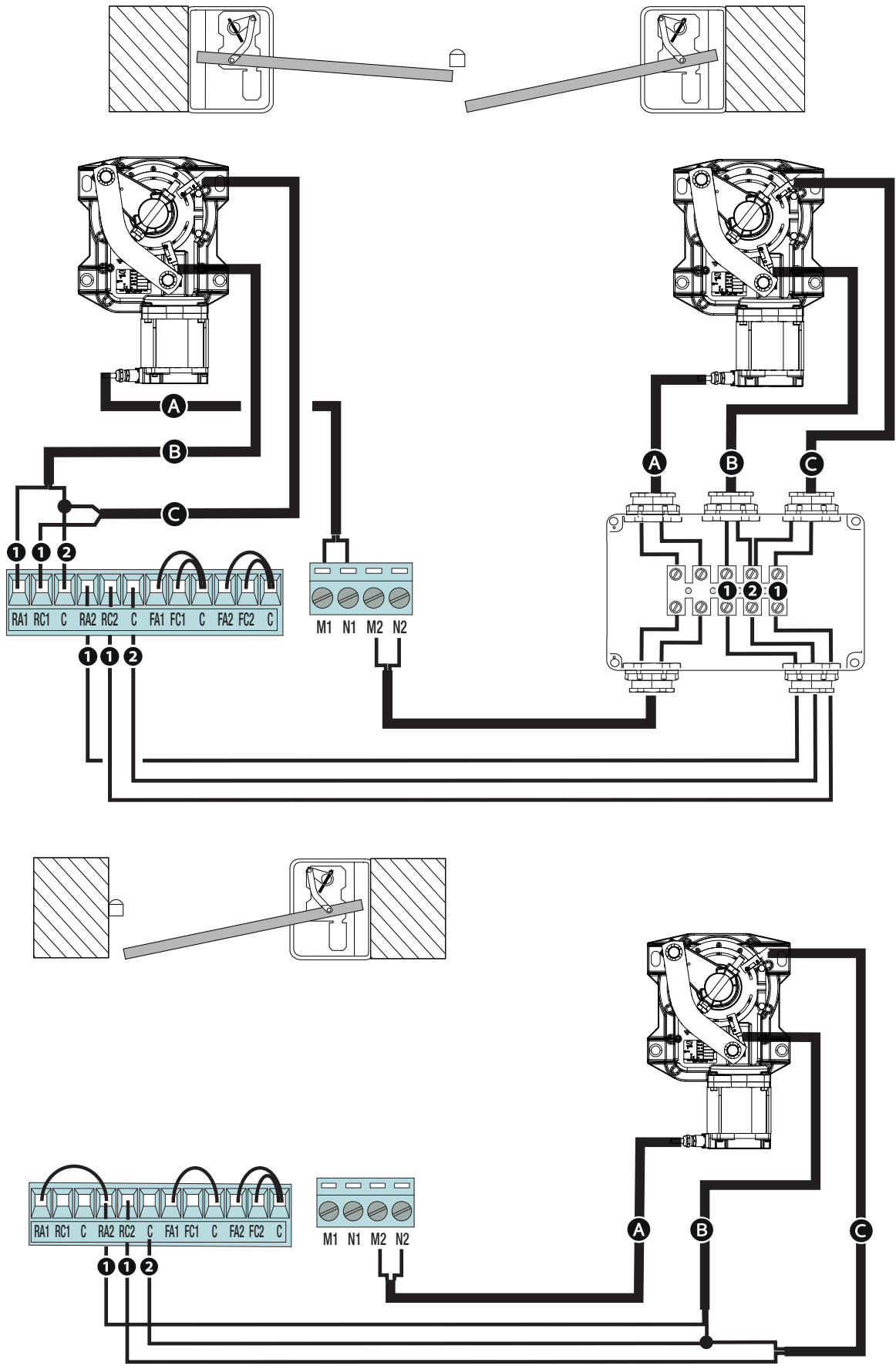


## Gearmotor without Encoder

- ① Brown cable
- ② Blue cable

- A** Power supply cable
- B** Cable for slowing down during opening
- C** Cable for slowing down during closing

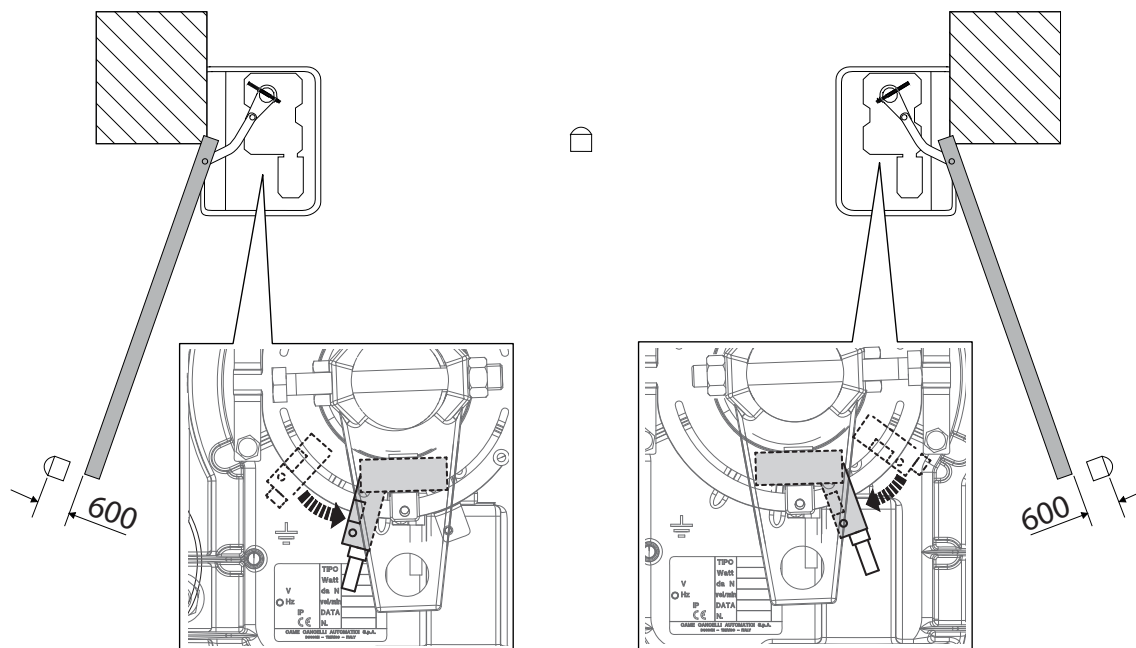




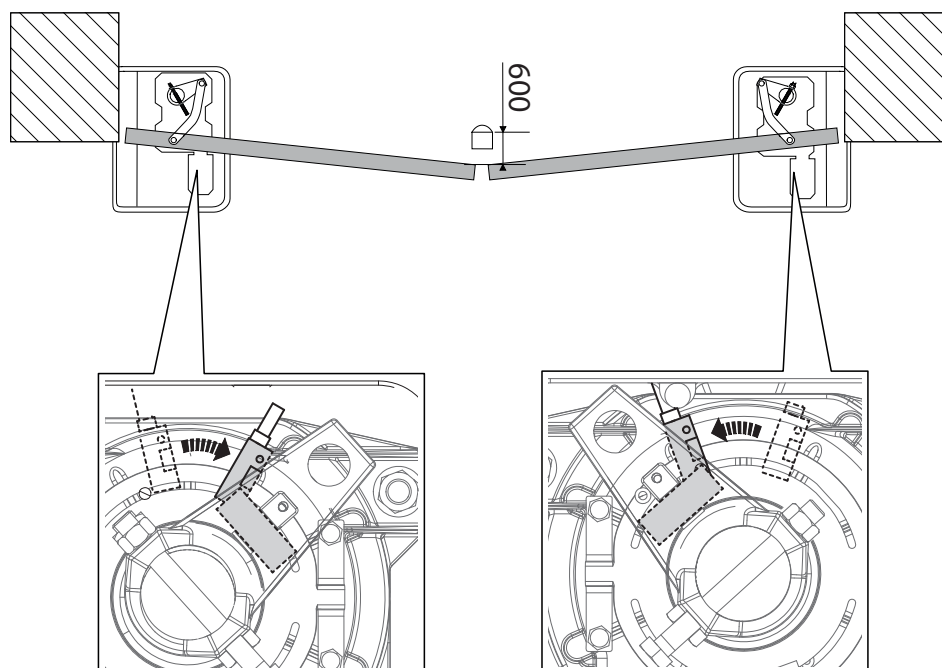
## Establishing the slow-down points \*

\* Only for the FROG-A24

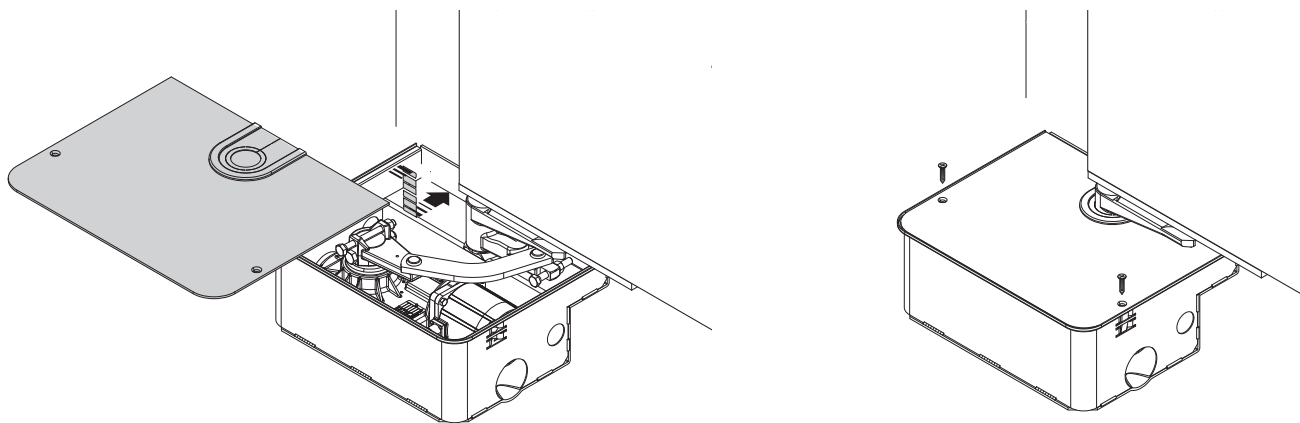
Give an opening command and stop the leaves at about 600 mm from the strike plate.  
Position the magnetic microswitches as shown in the images.



Give an closing command and stop the leaves at about 600 mm from the strike plate.  
Position the magnetic microswitches as shown in the images.



## FINAL OPERATIONS



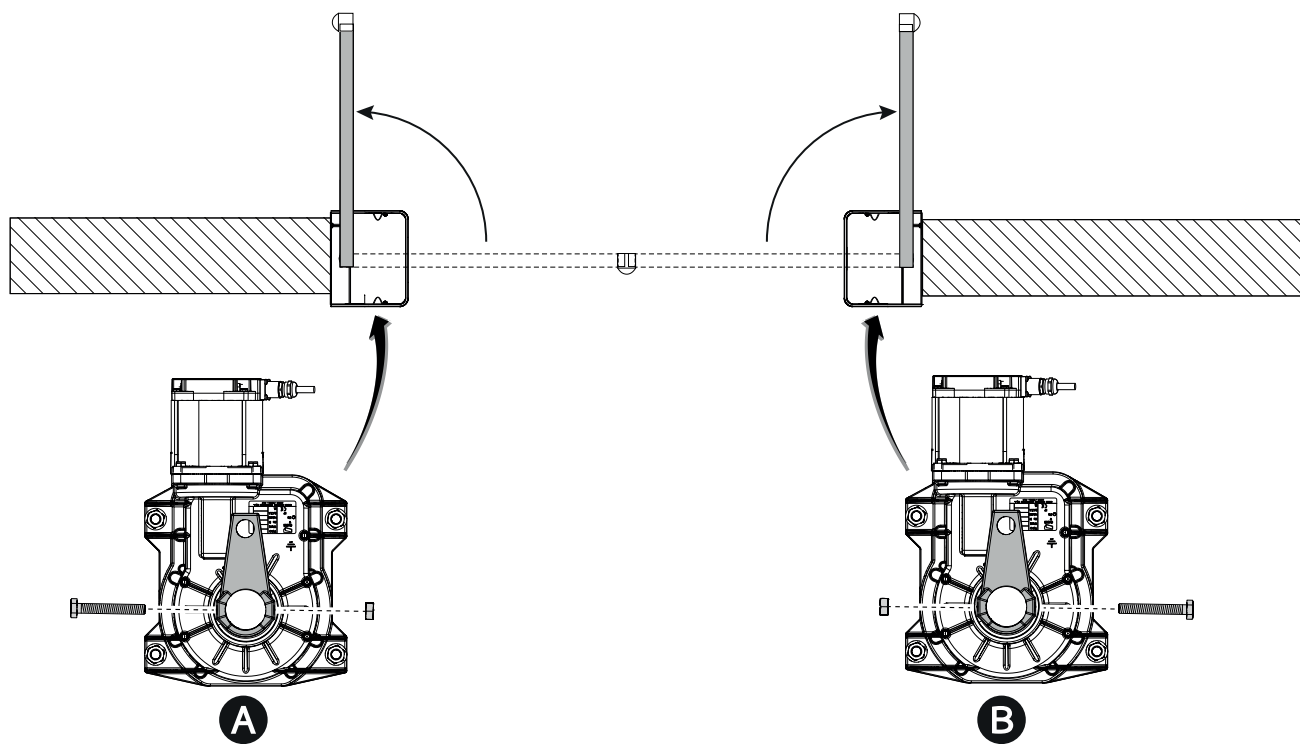
## OUTWARDS OPENING

 The operations other than the standard installation are described below.

### Setting up the gearmotor

Insert the closing limit-switch point adjustment screw into the gearmotor arm.

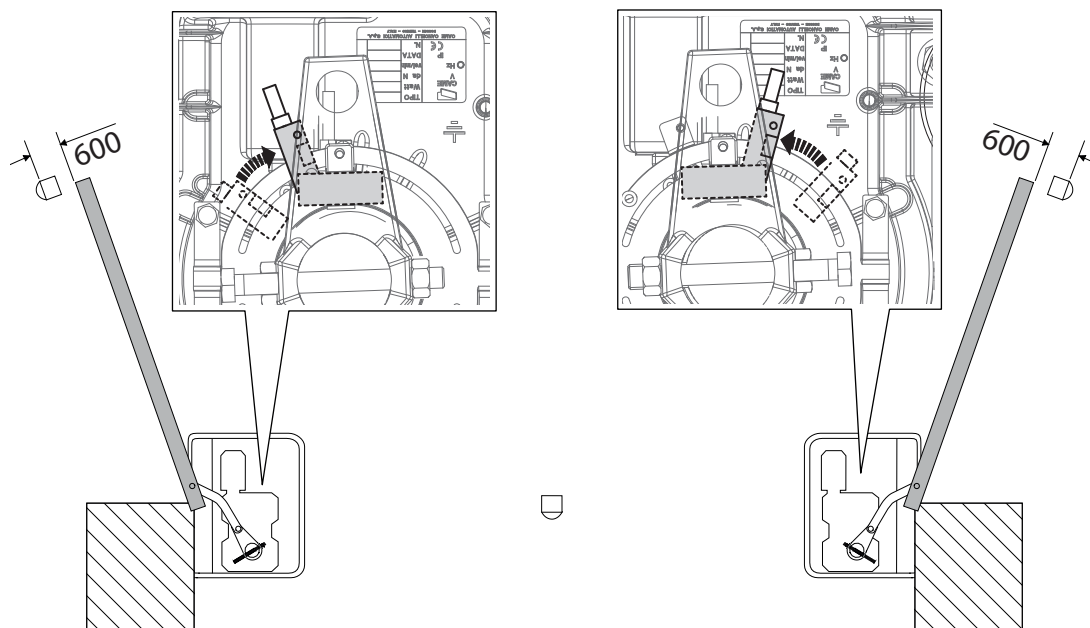
- A** Gearmotor installed on the left
- B** Gearmotor installed on the right



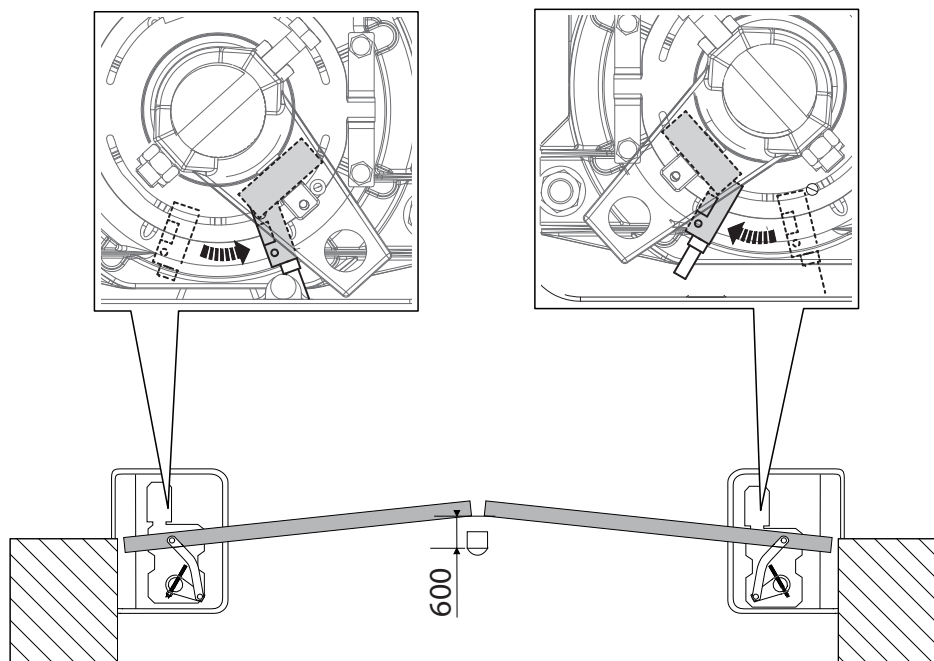
## Establishing the slow-down points \*

\* Only for the FROG-A24

Give an opening command and stop the leaves at about 600 mm from the strike plate.  
Position the magnetic microswitches as shown in the images.



Give an closing command and stop the leaves at about 600 mm from the strike plate.  
Position the magnetic microswitches as shown in the images.



DICHIAZIONE DI INCORPORAZIONE allegato / DECLARATION OF INCORPORATION annex / ERKLÄRUNG FÜR DEN EINBAU anhang / DECLARATION D'INCORPORATION annexe / DECLARACION DE INCORPORACION anexo / DECLARAÇÃO DE INCORPORAÇÃO anexo / DEKLARACJA WBDOWANIA załącznik / INBOUWERKLARING bijlage IIB - 2006/42/CE

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

**Came S.p.a.**

indirizzo / address / adresse / adresse / direccìon / endereço / adres / adres

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

**CAME** 

DICHIARA CHE IL MOTORIDUTTORE PER CANCELLI A BATTENTE / DECLARES THAT THE GEARMOTOR FOR SWING GATE / ERKLÄRT DASS DIE TORÖFFNER FÜR FLÜGELTORE / DECLARE QUE LE MOTORÉDUCTEUR POUR PORTAILS A BATTANTS / DECLARA QUE LAS MOTORREDUCTOR PARA PUERTAS BATIENTES / DECLARA QUE AS MOTORREDUTOR PARA PORTÕES A BATENTE / OSWIADCZA ZE SIŁOWNIK DO BRAM SKRZYDLOWYCH / VERKLAART DAT DE MOTOR VOOR DRAAIHEKKEN

FROG-A24-ELTRON

FROG-A24E

FROG-A24CSI

FROG-A24

FROG-A24ECSI

E' CONFORME ALLE DISPOSIZIONI DELLE SEGUENTI DIRETTIVE / IT COMPLIES WITH THE PROVISIONS OF THE FOLLOWING DIRECTIVES / DEN VORGABEN DER FOLGENDEN RICHTLINIEN ENTSPRECHEN / IL EST CONFORMES AUX DISPOSITIONS DES DIRECTIVES SUIVANTES / CUMPLEN CON LAS DISPOSICIONES DE LAS SIGUIENTES DIRECTIVAS / ESTÃO DE ACORDO COM AS DISPOSIÇÕES DAS SEGUINTES DIRECTIVAS / SA 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 ELETTROMAGNETICA / KOMPATYBILNOŚCI ELEKTROMAGNETYCZNEJ / ELEKTROMAGNETISCHE COMPATIBILITEIT : 2014/30/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 / Referencia normas armonizadas y otras normas técnicas / Referência de normas harmonizadas e outras normas técnicas / Odnosne normy ujednoliconé 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

RISPETTA I REQUISITI ESSENZIALI APPLICATI / MEET THE APPLICABLE ESSENTIAL REQUIREMENTS / DEN WESENTLIJHEN ANGEWANDTEN ANFORDERUNGEN ENTSPRECHEN / RESPECTENT LES CONDITIONS REQUISES NECESSAIRES APPLIQUEES / CUMPLEN CON LOS REQUISITOS ESENCIALES APLICADOS / RESPETAM O REQUISITOS ESSENCIAIS APLICADOS / SPEŁNIAJA PODSTAWOWE WYMAGANIA 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; 1.5.11; 1.5.13; 1.6.1; 1.6.3; 1.6.4; 1.7.1; 1.7.2; 1.7.4**

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La documentazione tecnica pertinente è stata compilata in conformità all'allegato VII B. / The pertinent technical documentation has been drawn up in compliance with attached document VII B. / Die relevante technische Dokumentation wurde entsprechend der Anlage VII B 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 VII B. / A documentação técnica pertinente foi preenchida de acordo com o anexo VII B. / Odnosna dokumentacja techniczna została zredagowana zgodnie z załącznikiem VII B. / De technische documentatie terzake is opgesteld in overeenstemming met de bijlage VII B.

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la messa in servizio finché 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 urządzenia 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 voltooidde machine moet worden ingebouwd in overeenstemming is verklaard, indien toepasselijk met de richtlijn 2006/42/EG.

Dosson di Casier (TV)  
28 Giugno / June / Juni / Juin / Junio  
/ Junho / Czerwcu / Juni 2017

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

Andrea Merluzzo


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info@came.it - www.came.com

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## DISMANTLING AND DISPOSAL

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

### DISPOSING OF THE PRODUCT

Our products are made of various materials. Most of these (aluminium, 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** 

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### **CAME S.P.A.**

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