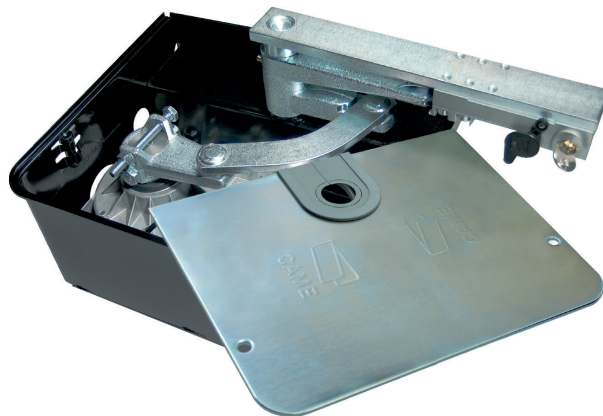


Swing-gate operator FROG

FA01316-EN

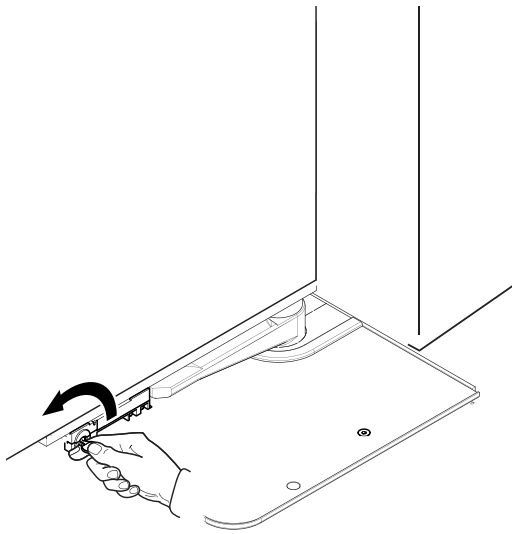


FROG-A FROG-AV FROG-AE

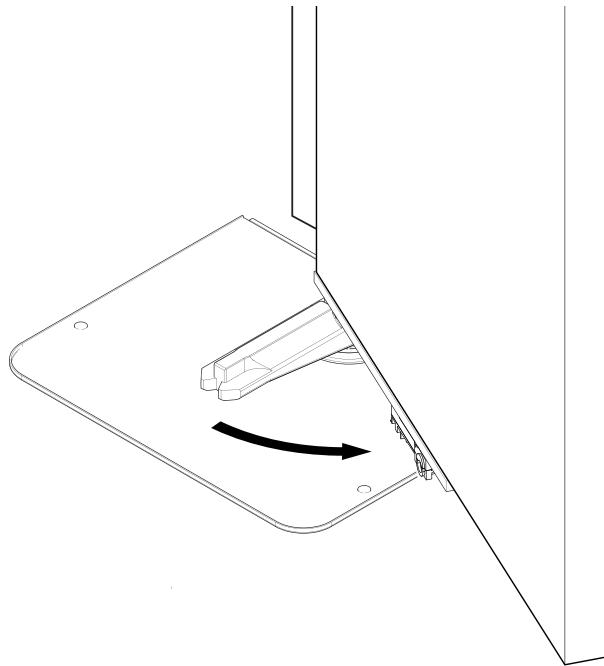
INSTALLATION MANUAL



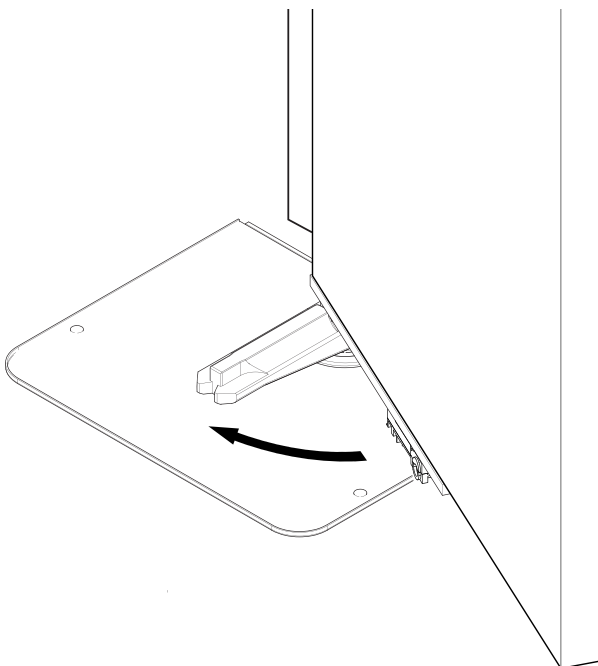
1



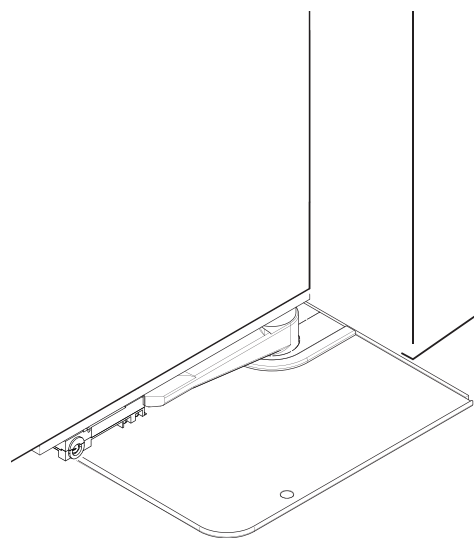
2



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.

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.

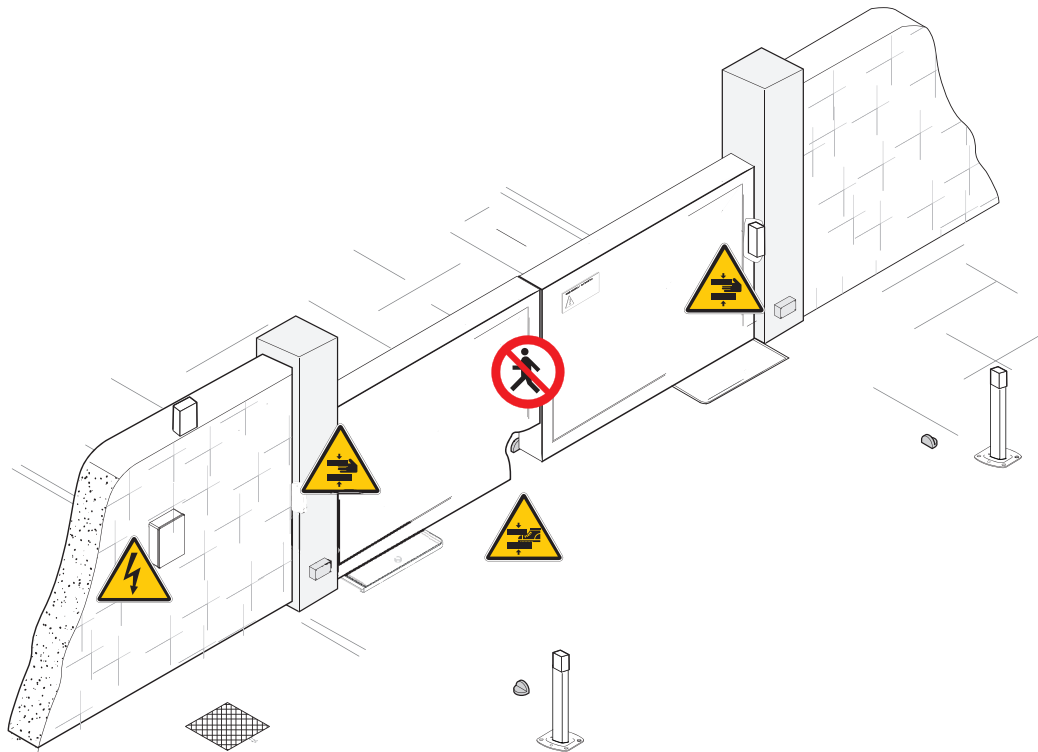
Fit, in plain sight, the machine's ID plate when the installation is complete.

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 ground-concealed gearmotor for swing gates up to 3.5 m in length per leaf, with adjustable leaf-closing.
Irreversible ground-concealed gearmotor for swing gates up to 1.3 m in length per leaf, with adjustable leaf-closing (Fast Version).
Irreversible ground-concealed gearmotor for swing gates up to 3.5 m in length per leaf, with adjustable leaf-closing.

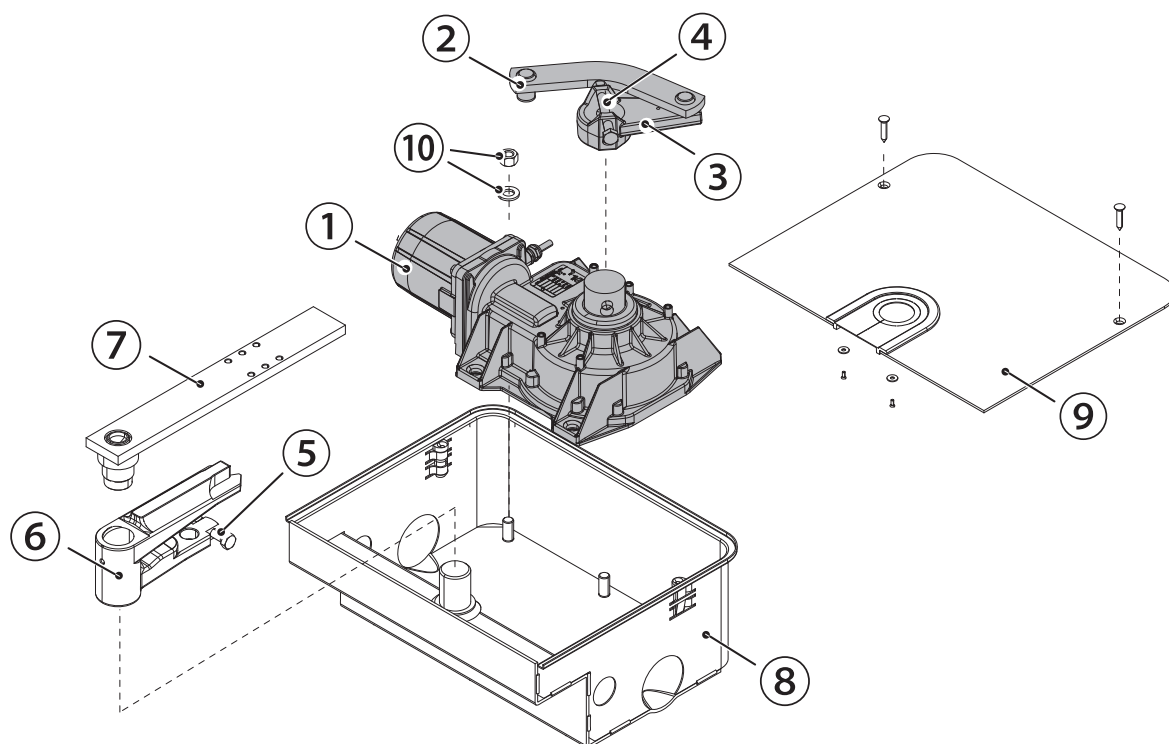
Intended use

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

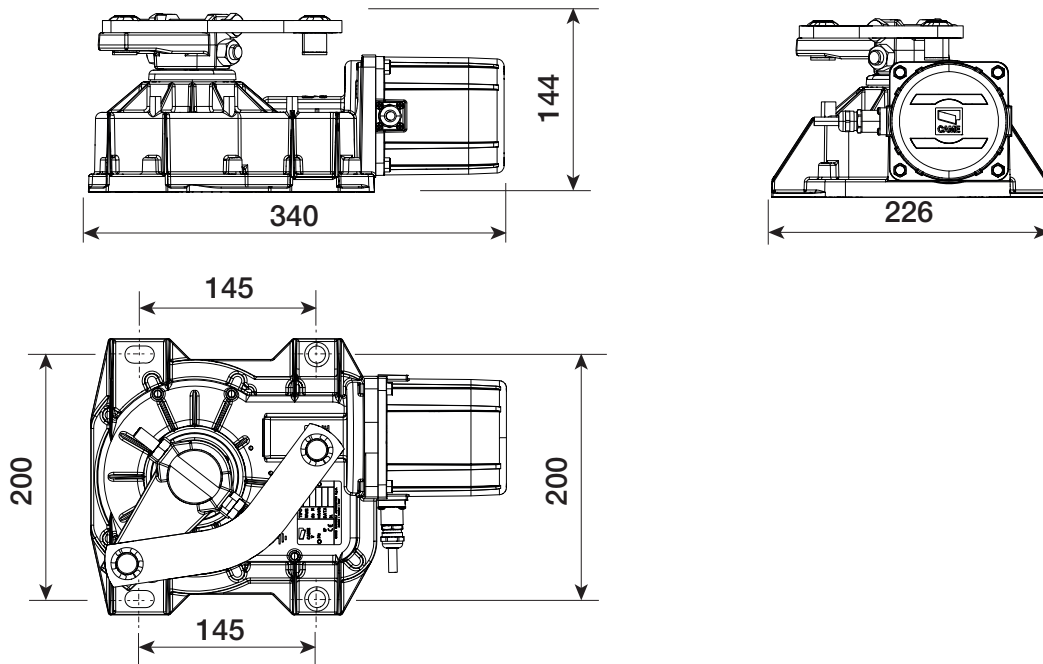
 Any installation and/or use other than that specified in this manual is forbidden.

Description of parts

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



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-A				FROG-AE				FROG-AV
Gate-leaf length (m)	3,5	2,5	2	-	3,5	2,5	2	-	1,3
Gate-leaf weight (Kg)	*400	*600	800	-	*400	*600	800	-	300

Technical data

MODELS	FROG-A	FROG-AE	FROG-AV
Power supply (V - 50/60 Hz)	230 AC	230 AC	230 AC
Motor power supply (V)	230 AC 50/60 Hz	230 AC 50/60 Hz	230 AC 50/60 Hz
Power (W)	460	460	300
Current draw (mA)	1,9	1,9	2,5
Working temperature (°C)	-20 ÷ +55	-20 ÷ +55	-20 ÷ +55
Torque (Nm)	320	320	240
Opening time at 90° (s)	18	18	9
Cycles/hour	11	11	-
Consecutive cycles	3	3	-
Motor thermal protection (°C)	150	150	150
Protection rating (IP)	67	67	67
Insulation class	I	I	I

Cable types and minimum thicknesses

Cable length (m)	up to 20	from 20 to 30
Power supply to motor 230 V AC	3G x 1.5 mm ²	3G x 2.5 mm ²
Micro limit-switches	* no. x 0.5 mm ²	* no. x 0.5 mm ²


*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

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.

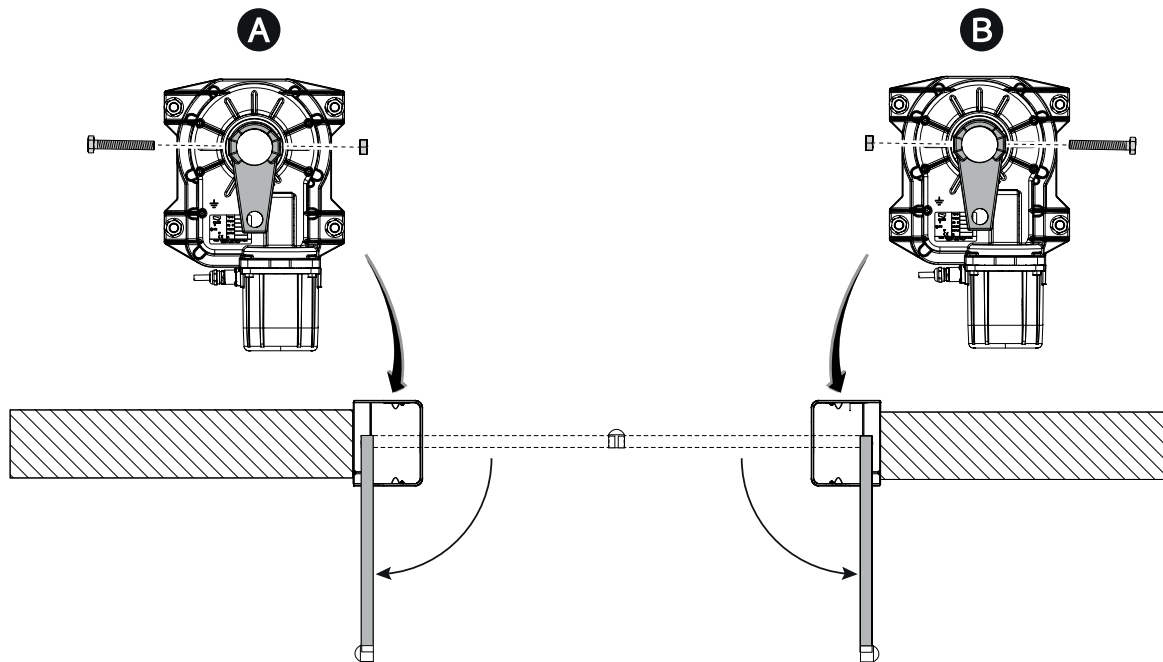
Preliminary operations

 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.

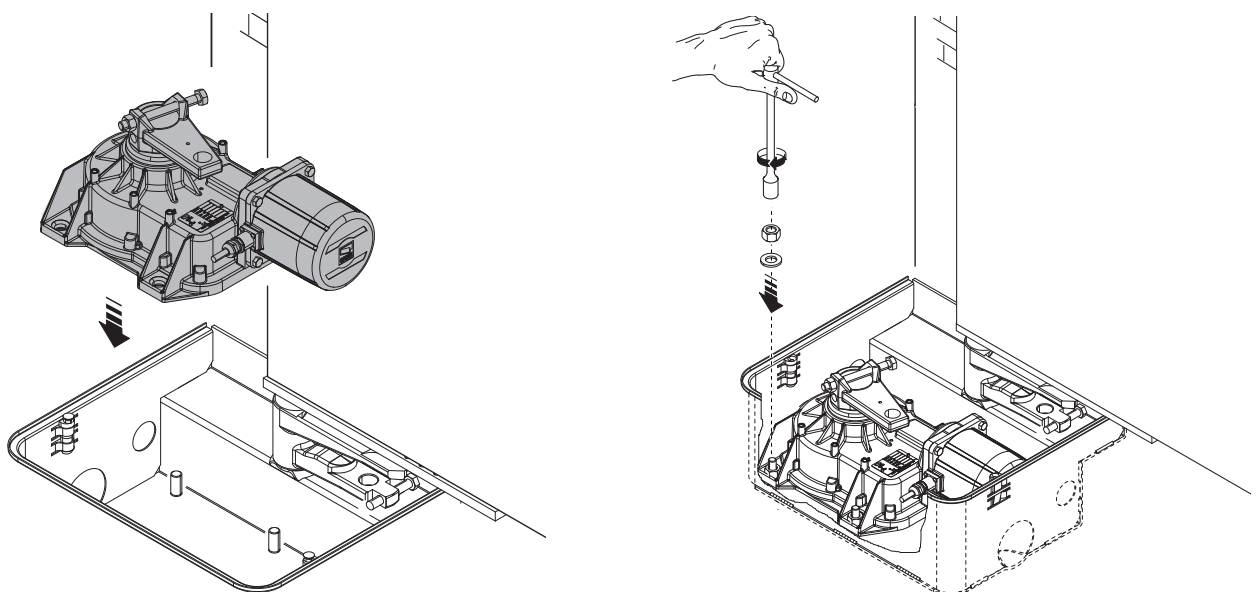
- A** Gearmotor installed on the left
- B** Gearmotor installed on the right



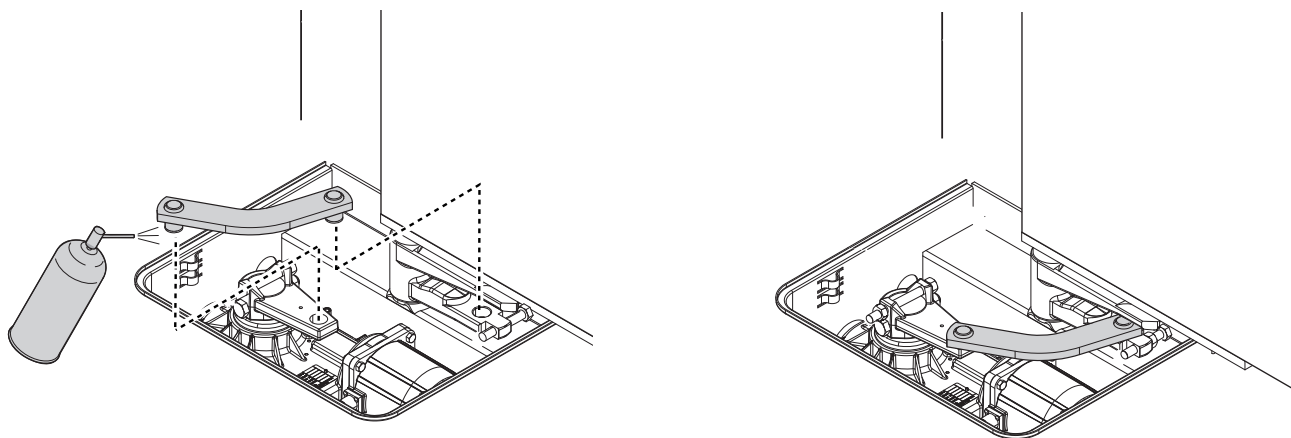
Fastening the gearmotor

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.



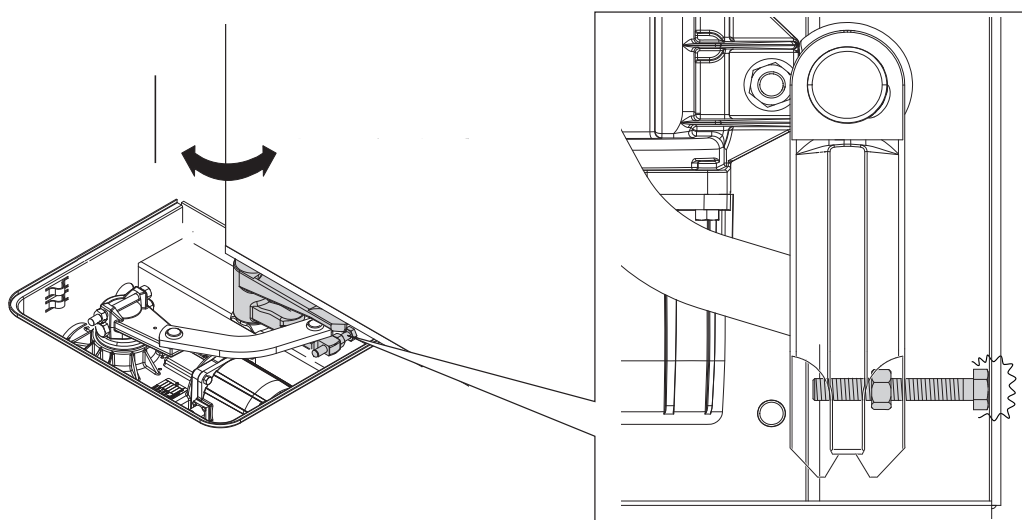
Establishing the travel end points with mechanical limit-switches

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.

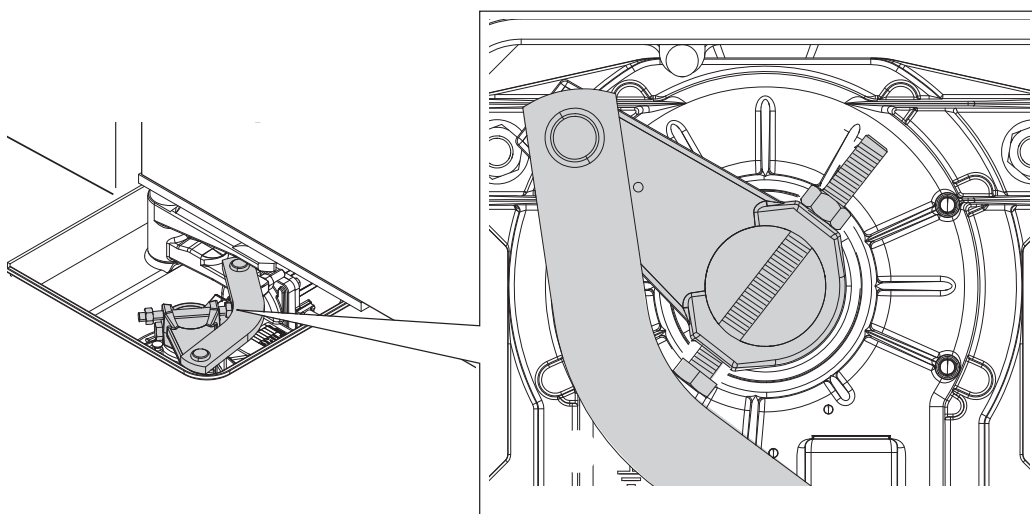
Tighten the nut to lock the screw into position.



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

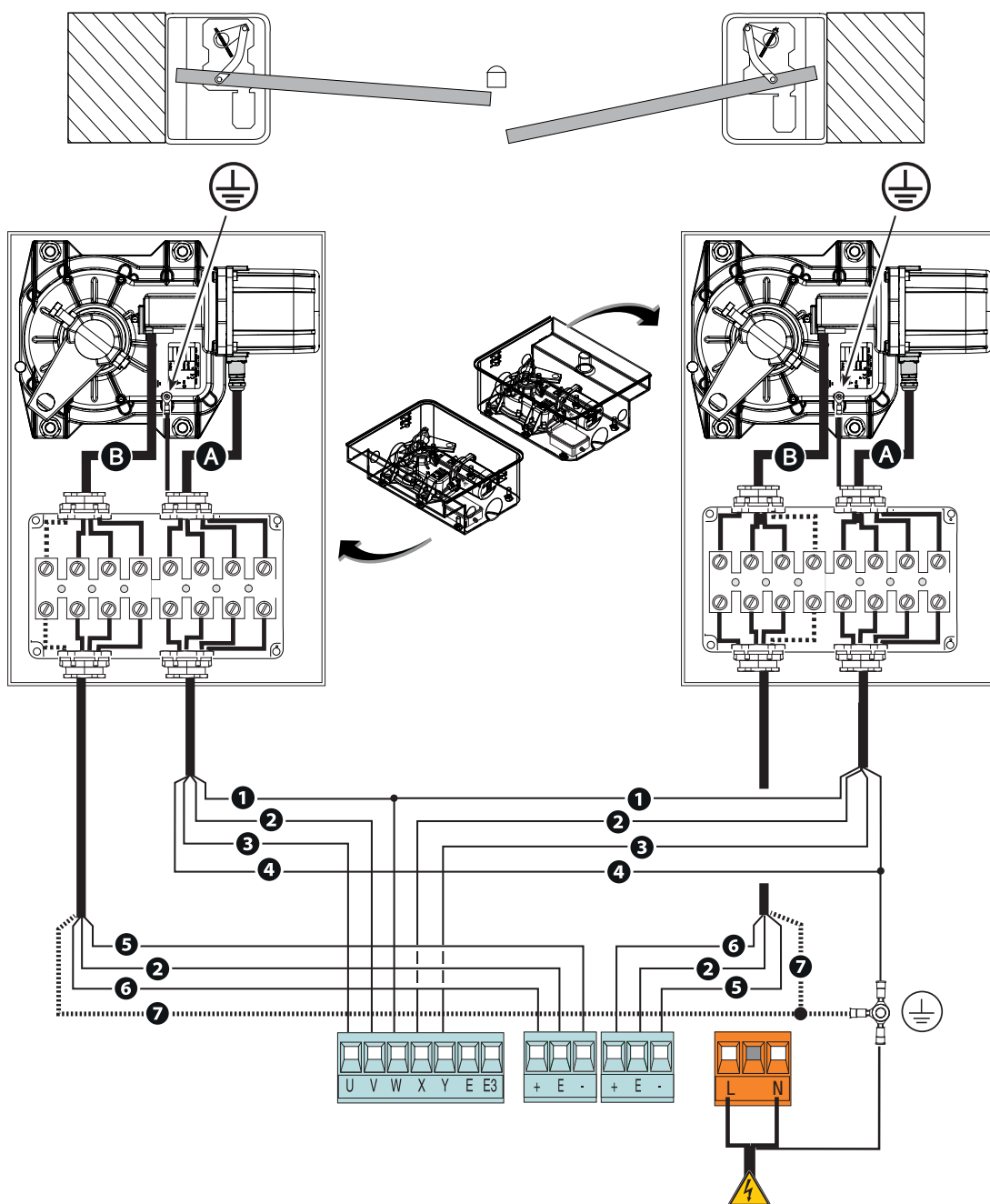
⚠ Before working on the control panel, cut off the mains power supply and remove the batteries, if any.

📖 Provide IP67 junction boxes with terminal blocks for connections.

Gear motor with Encoder

- ① Blue cable
- ② Brown cable
- ③ Black cable
- ④ Yellow-green cable
- ⑤ Green cable
- ⑥ White cable
- ⑦ Earthing braid

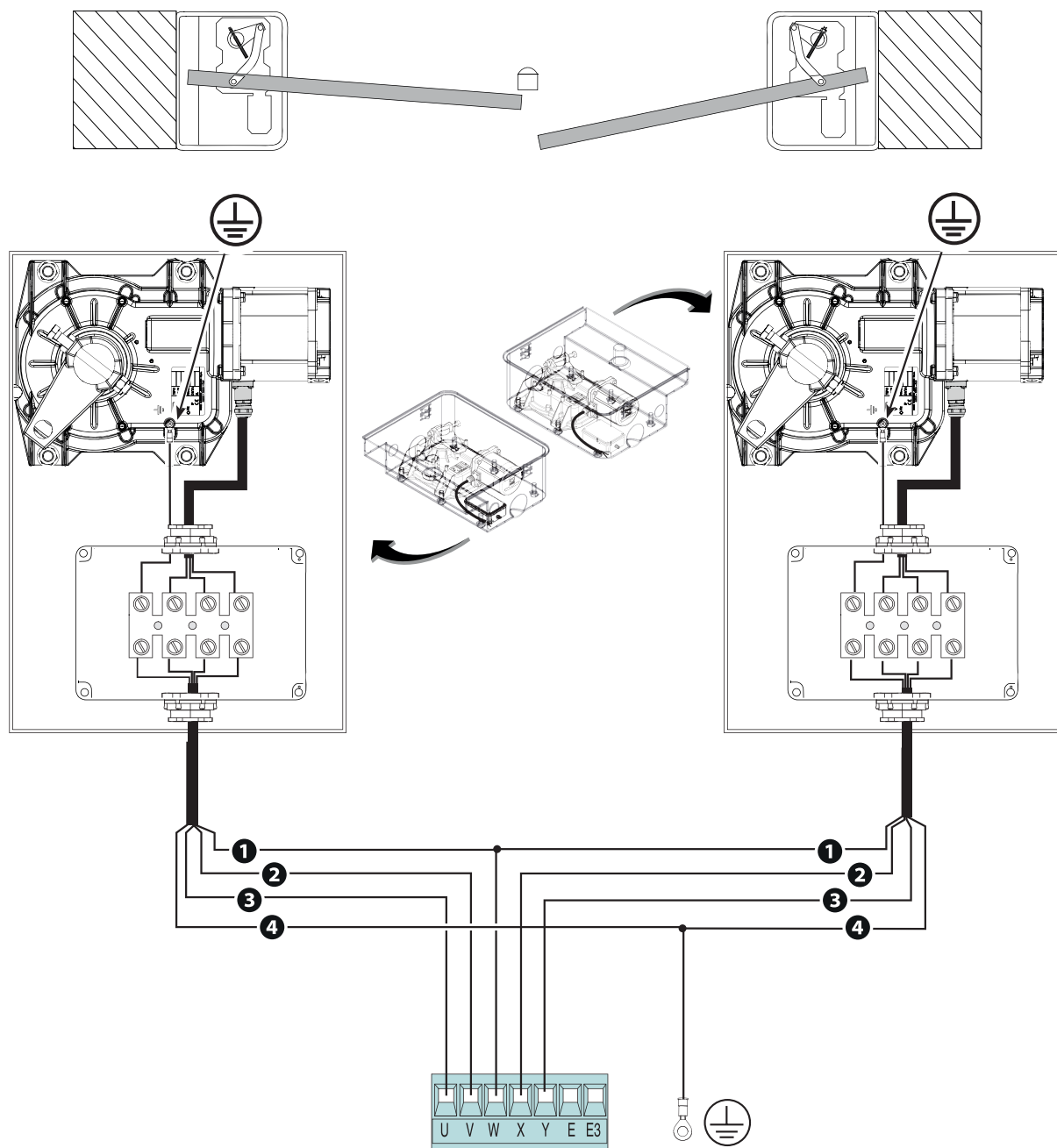
- Ⓐ Power supply cable
- Ⓑ Encoder cable




📖 Check the correct direction of rotation of the gearmotor and, if necessary, invert the connection of the brown and black cables.

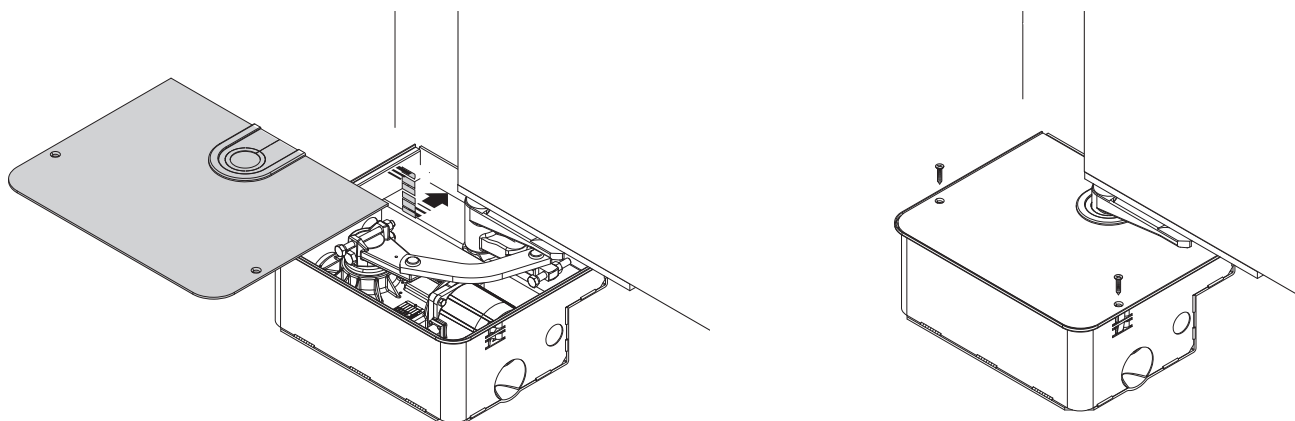
Gearmotor without Encoder

- ① Blue cable
- ② Brown cable
- ③ Black cable
- ④ Yellow-green cable




 Check the correct direction of rotation of the gearmotor and, if necessary, invert the connection of the brown and black cables.

FINAL OPERATIONS



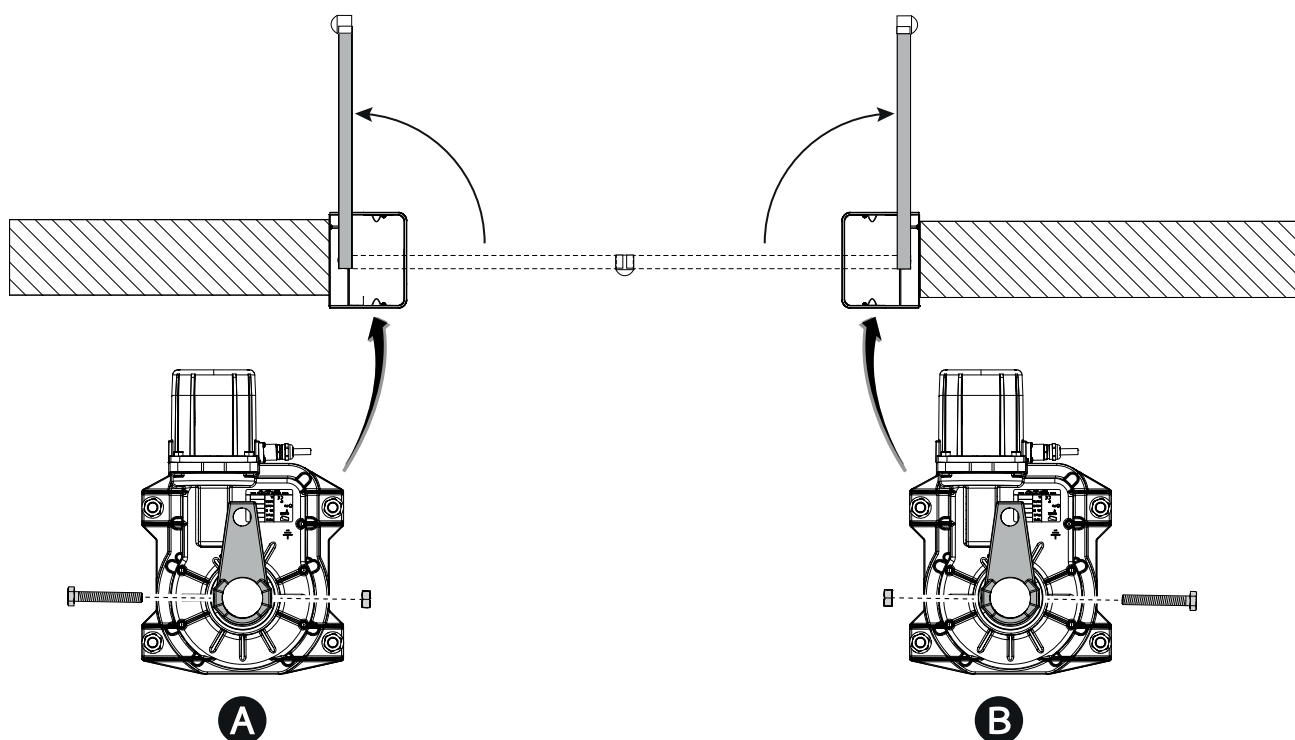
OUTWARDS OPENING

 The only operation that is different from the standard installation is 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



DICHIMFAZIONE DI INCORPORAZIONE allegato / DECLARATION OF INCORPORATION annex / ERKLÄRUNG FÜR DEN ENBAU anhang / DECLARATION D'INCORPORATION annexe / DECLARACION DE INCORPORACION anexo / DECLARACAO DE INCORPORACAO anexo / DEKLARACJA WBUROWANIA załącznik / INBOUWERKLARING bijlage IIB - 2006/42/CE

Fabbricante / Manufacturer / Hersteller / Fabricant / Fabricante / Fabricante / Wytwórca / Fabrikant
Came S.p.a.
Indirizzo / address / adresse / dirección / endereço / adres / adres
Via Martiri della Libertà 15 31030 - Dosson di Casier Treviso - Italy



DICHIMARA CHE LE AUTOMAZIONI INTERPATE PER CANCELLI A BATTENTE / DECLARES THAT THE UNDERGROUND OPERATORS FOR SWING GATES / ERKLÄRT DASS DIE UNTERFLURANTRIEB FÜR DREHTORE / DECLARE QUE LE AUTOMATISME ENTEFFE POUR PORTAILS BATTANTS / DECLARA QUE LAS AUTOMATIZACION ENTERRADA PARA CANCELLOS BATTENTES / DECLARA QUE AS AUTOMATIZACOES ENTERRADAS PORTOES A BATENTE / OS MANO-CELE AUTOMATYZKA DO PRACY SPRZĘTOWYCH DO MONTAŻU PODZIEMNEGO / KERLAART DAT DE ONDER-GRONDSE AUTOMATISERING

FROG-A
FROG-AE
FROG-A1

E' CONFORME ALLE DISPOSIZIONI DELLE SEGUENTI DIRETTIVE / IT COMPLIES WITH THE PROVISIONS OF THE FOLLOWING DIRECTIVES / DEN VORLIGEN DEUTSCHEN RICHTLINIEN ENTSPRECHEN / IL EST CONFORMES AUX DISPOSITIONS DES DIRECTIVES SUIVANTES / CUMPLIEN CON LAS DISPOSICIONES DE LAS SIGUIENTES DIRECTIVAS / ESTAO DE ACORDO COM AS DISPOSICOES DAS SEGUENTES DIRECTIVAS / SA ŽODINE Ž POSTANOVENIMAMI NASTEPUJUCYCH DYREKTYW EUROPEJSKICH / VOLDIEN AAN DE VOORSCHRIFTEN VAN DE VOLGENDE RICHTLINIEN

- COMPATIBILITA' ELETTROMAGNETICA / ELECTROMAGNETIC COMPATIBILITY / ELEKTROMAGNETISCHE VERTRÄGLICHKEIT / COMPATIBILITE ELECTROMAGNETIQUE / COMPATIBILIDAD ELECTROMAGNETICA / COMPATIBILIDADE ELETTROMAGNETICA / KOMPATIBILNOSCI ELEKTROMAGNETYCZNEJ / ELEKTROMAGNETISCHE COMPATIBILITEIT : 2014/30/AE.

Riferimento norme armonizzate ed altre norme tecniche / Refer to European regulations and other technical regulations / Harmonizirane Bezoopredmeti und andere technische Vorschriften / Référence aux normes harmonisées et aux autres normes techniques / Referência normas armonizadas y otras normas técnicas / Referența de norme armonizate și cuiva norme tehnice / Odnosne normi upodobiljavni i lina normi tehnične / Geharmoniseerde en andere technische normen waarnaar te verwezen

EN 61000-6-1:2007
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 WESENTLIJCHEN AANGEVANDETE AN-OFORDERINGEN ENTSPRECHEN / RESPECTENT LES CONDITIONS REQUISES NECESSAIRES APPLICABLES / CUMPLIEN CON LOS REQUISITOS ESSENCIALES APLICAM O REQUISITOS ESSENCIALES APLICACOES / SPENIAJA POSTAWIONE WYMAGANE WYRUNKI / VOLDIEN AAN DE TOEPASSABE 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 COSTITUIRE LA DOCUMENTAZIONE TECNICA PERTINENTE / PERSON AUTHORIZED TO COMPILE THE RELEVANT TECHNICAL DOCUMENTATION / PERSON DE RELEVANTEN TECHNISCHEN UNTERLAGEN ZUSAMMENSTELLEN / DOCUMENTATION TECHNIQUE SPECIFIQUE D'AUTORISATION A CONSTITUER DE / PERSONA INCLAZADA PARA ELABORAR LA DOCUMENTACION TECNICA PERTINENTE / PESSOA AUTORIZADA A CONSTITUIR A DOCUMENTACAO TECNICA PERTINENTE / OSOBA UPORNAZENA DO PRIPRAVOWANIA DOKUMENTACIJA TECHNICZNEJ / OSOBA UZASNOVAZENA DO PRIPRAVOWANJA DOKUMENTACIJE TEHNIČNE / OSOBA UZASNOVAZENA DO PRIPRAVOWANJA DOKUMENTACIJE TEHNIČNE / SAMEN TE STELLEN

CAME S.p.a.

La documentazione tecnica pertinente è stata compilata in conformità all'allegato VIB. / The pertinent technical documentation has been drawn up in compliance with attached document VIB. / Die relevante technische Dokumentation wurde entsprechend der Anlage VIB erstellt. / La documentación técnica pertinente ha sido redactada en cumplimiento con el anexo VIB. / A documentação técnica pertinente foi preenchida de acordo com o anexo VIB. / Odnosna dokumentacija tehnična nastala skladno s prilogom z oznako VIB. / De technische documentatie bestaat in overeenstemming met de bijlage VIB.

CAME S.p.a. di invio a trascritto, in risposta a una richiesta segnalatoria motivata dalle autorità nazionali, informazioni pertinenti sulle quali macchine, e / Came S.p.a., following a duly motivated request from the national authorities, undertakes to provide information related to the said machines, and / Die Firma Came S.p.a. weigert sich auf ein angemessenes schriftliche Anfrage der staatlichen Behörden Informationen über die unvollständigen Maschinen, zu übermitteln, und / Came S.p.a., si invia a trascritto, in risposta a una richiesta motivata da un' autorità nazionale, informazioni relative sulle cui macchine, e / Came S.p.a., se compromette a trascritto, como respuesta a una solicitud adecuadamente fundada por parte de las autoridades nacionales, informaciones relativas con las cuales máquinas / Came S.p.a. compromete-se em fornecer, em resposta a uma solicitação motivada apropriadamente pelas autoridades nacionais, informações pertinentes às partes que compoem máquinas / Came S.p.a., adota-se a se de submeter informações adequadamente motivadas relacionadas na correspondência com o motivo a prova, dados para competência organy państwa / Came S.p.a. wełnada się artos an op mat relacjom onkredź wsterek van de autoriteit autoriteiten de relevante informatie voor de niet voltooide machine moet worden ingediend in overeenstemming met de vermelding.

VIETA / FORBIDS / VERBIETET / INTERDI / PROHIBE / PROIBO / ZABRAMIA SIE / VERBIEDT
La messa in servizio di questa macchina deve essere autorizzata conformemente al caso della 2006/42/CE. / The installation of the above mentioned unit must be authorized in accordance with the provisions of the 2006/42/CE. / Die Inbetriebnahme dieser „Eintrachse“ in der unvollständigen Maschine ist erst dann zulässig, wenn sie zuvor durch die zuständige Behörde genehmigt wurde. / No está en servicio hasta que la máquina haya sido autorizada por el organismo a su país de destino conforme, si caso aplicable, la norma 2006/42/CE. / La puesta en servicio de esta máquina debe ser autorizada por el organismo de conformidad de acuerdo a la 2006/42/CE. / A colocação em funcionamento, até que a máquina seja, antes de ser incorporada, não for declarada em conformidade, se do acordo com a 2006/42/CE. / Unvollständige Installation der Maschine ist erst dann zulässig, wenn sie zuvor durch die zuständige Behörde genehmigt wurde. / Die Inbetriebnahme dieser „Eintrachse“ ist erst dann zulässig, wenn sie zuvor durch die zuständige Behörde genehmigt wurde. / Het gebruik van deze onvolledige machine moet worden toegestaan in overeenstemming met de vermelding.

Dosson di Casier (TV)
20 Aprile / April / April / April / April / April / Kwiecień / April 2016

Administratore Delegato / Managing Director /
General Director / Directeur Général / Director General /
Administrador Delegado / Dyrektor Zarządzający /
Algemeen Directeur
Andrea Murtizzo

Fascicolo tecnico a supporto / Supporting technical dossier / Unterstützung technische Dossier / soutien dossier technique / apoyo expediente técnico / apolcar dossier técnico / wsparzenie dokumentacji technicznej / ondersteunende technische dossier: 001FROG-A

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. 1.010.000,00 € - C.F. e P.I. 03481280295 - VAT IT 03481280295 - REA TV 273358 - Reg Imp. TV 03481280295

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 S.P.A.

Via Martiri della Libertà, 15
31030 Dosson di Casier
Treviso - Italy
Tel. (+39) 0422 4940
Fax (+39) 0422 4941

CAME.COM