

Motoriduttori per porte basculanti a contrappesi

Istruzioni d'uso ed avvertenze

Counterweight overhead door operator

Operating instructions and warnings

Automatisation pour portes basculantes à contrepoids

Notice d'emploi et avertissements

Motorreductores para puertas basculantes con contrapesos

Instrucciones de uso y advertencias

Motoredutor para portas basculantes a contrapesos

Instruções para utilização e advertências

DEA[®]



BASCULANTE



IT

EN

FR

ES

PT

LIVI 902

IT UTILIZZO DEL LIBRETTO

Per facilitare la comunicazione e la rintracciabilità di particolari importanti informazioni all'interno del testo DEA System adotta la simbologia riportata.

EN USE OF THIS BOOKLET

In order to facilitate communication and the traceability of particularly important parts of the text, DEA System adopts the symbols provided.

FR UTILISATION DE CE LIVRET

Pour faciliter la communication et le repérage de renseignements spéciaux et importants à l'intérieur du texte, DEA System a adopté la symbolologie indiquée.

ES UTILIZACIÓN DEL MANUAL

Para facilitar la comunicación y la trazabilidad de informaciones de particular importancia, DEA System adopta, en el interior del texto, la simbología reproducida.

PT UTILIZAÇÃO DO FOLHETO

Para facilitar a comunicação e localizar pormenores importantes de informações no interior do texto, a DEA System adoptou os símbolos apresentados.

	Avvertimento Warning Avertissement Advertencia Advertência
	Pericolo Danger Danger Peligro Perigo
	Consultazione Consultation Consultation Consultación Consulta
	Osservazione Observation Observation Observación Observação
	Ispezione Inspection Inspection Inspección Inspeção
	Certificazione Certification Certification Certificación Certificado

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LIVI 902

Counterweight overhead door operator Operating instructions and warnings

ENGLISH

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ANNEXES

- Instructions for the final user
- Terms of warranty

OVERVIEW

SCOPE OF THE INSTRUCTIONS

These instructions were prepared by the manufacturer and are an integral part of the product. The operations described are intended for adequately trained and qualified operators and must be carefully read and conserved for future reference.

Chapters "2 RESIDUAL RISK WARNINGS" and "4 OPERATING INSTRUCTIONS" contain all the information that **DEA** System provides in order for the product to constantly satisfy the Essential Safety Requirements prescribed by the Machinery Directive (European Directive 2006/42/CE).

Read these chapters carefully because they contain important instructions for safe installation, use and maintenance and important warnings regarding the residual risks remaining even after all the safety devices and measures described have been applied.

The product is designed for installation in complete closing systems subject to specific legislation. Chapter 6 "COMPLETE CLOSING ASSEMBLY" provides useful information for the respect of the Essential Safety Requisites for special types of closing.



1 PRODUCT CONFORMITY

DEA System guarantees the conformity of the product to European Directives 2006/42/CE regarding machinery safety, 2004/108/CE electromagnetic compatibility and 2006/95/CE low voltage electrical equipment. **DEA** System also encloses the manufacturer's Declaration of Conformity with these instructions (see Directive 2006/42/CE Art. 4, paragraph 2).



2 RESIDUAL RISK WARNINGS

Read these warnings carefully; the failure to respect the following warnings can create risk situations.

WARNING The use of the product under unusual conditions not foreseen by the manufacturer can create situations of danger, and for this reason all the conditions prescribed in these instructions must be respected.

WARNING Under no circumstances must the product be used in explosive atmospheres or surroundings that may prove corrosive and damage parts of the product.

WARNING The operator and/or its parts shall never be considered as support and/or safety devices for the overhead door. Make sure the overhead door is equipped with appropriate support and safety systems

WARNING All installation, maintenance, cleaning or repair operations on any part of the system must be performed exclusively by qualified personnel with the power supply disconnected working in strict compliance with the electrical standards and regulations in force in the nation of installation.

WARNING All the other adjustment/setting operations beyond the adjustment of the oil flow are made by the manufacturer. Tampering with these settings may cause malfunction and/or situations of risk to people, animals and property. Refrain from performing any operations not authorised by **DEA** System.

WARNING The use of spare parts not indicated by **DEA** System and/or incorrect re-assembly can create risk to people, animals and property and also damage the product. For this reason, always use only the parts indicated by **DEA** System and scrupulously follow all assembly instructions.

WARNING Awareness of the operation of the key-release mechanism (see F9 Page 32) is essential for all users of the automatism because the failure to use the device quickly during emergencies can jeopardise people, animals and property. Enclosure I to these instructions, which the installer is required to deliver to the final user, illustrates operation and can be detached.

WARNING **DEA** System reminds all users that the selection, positioning and installation of all materials and devices which make up the complete automation system, must comply with the European Directives 2006/42/CE (Machinery Directive), 2004/108/CE (electromagnetic compatibility), 2006/95/CE (low voltage electrical equipment). In order to ensure a suitable level of safety, besides complying with local regulations, it is advisable to comply also with the above mentioned Directives in all extra European countries.



Operating instructions and warnings

⚠ WARNING To ensure an appropriate level of electrical safety always keep the 230V power supply cables apart (minimum 4mm in the open or 1 mm through insulation) from low voltage cables (motors power supply, controls, electric locks, aerial and auxiliary circuits power supply), and fasten the latter with appropriate clamps near the terminal boards.

⚠ WARNING Wrong assessment of impact forces may cause serious damage to people, animal and things. DEA System reminds all personnel that the installer must ascertain that these impact forces, measured according to EN 12445 prescriptions, are actually below the limits indicated by EN12453 regulation.



⚠ WARNING In line with EU Directive 2002/96/EC for waste electrical and electronic equipment (WEEE), this electrical product must not be disposed of as unsorted municipal waste. Please dispose of this product by returning it to your local municipal collection point for recycling.



3 MODELS AND CONTENTS OF THE PACKAGE

The name LIVI 902 identifies a series of electromechanical operators with different features depending on reversibility, motor phase power supply, presence of built-in limit switches, encoder and control panel and the design.

DEA System articles in the series are listed in the "AVAILABLE MODELS" table. LIVI 902 is completed by a set of accessories listed in the "PRODUCT ACCESSORIES" table. Inspect the "Contents of the Package" on Page 30 and compare it with your product for useful consultation during assembly.



4 OPERATING INSTRUCTIONS

In compliance with Directive 2006/42/CE Enclosure I, Point 1.7.4.

4.1 Product description

LIVI 902 is basically a mechanical operator (see F1, page 30) double splined shaft; it is this shaft which, properly assembled with pipes, telescopic arms and overhead supports, allows its working (see F1 page 30). All models are equipped with courtesy light.

4.2 Technical data

See the "TECHNICAL DATA" table.

"PRODUCT ACCESSORIES" table

Articolo	Description
Accessories for emergency release	
960K	Release system accessories kit
960C	Holecover with Viro key for external release
960M	Release device with cable
Accessories for installation	
950	Straight telescopic arm (tube 40x10)
951	Bent telescopic arm (tube 40x10)
952B	Pair of pipes with bushing (for central installation)
952BL	Pair of pipes with bushing 2 mt long (for central installation))
953	Fixing plate mt. 1,3 for LIVI 902
953N	Fixing plate mt. 1,3 for LIVI 902
953L	Fixing plate mt. 1,99 for LIVI 902
953NL	Fixing plate mt. 1,99 for LIVI 902
954	Grooved bushing (for side installation)
955	Pipe support (for central installation)
950V	Straight telescopic arm to be screwed
951V	Bent telescopic arm to be screwed
954V	Grooved bushing to be screwed
955V	Installation support to be screwed

4.3 Labelling information

Part of the summarised data for the label are listed in the label applied to the product (see Position F5, Page 31); the data regarding the seller are found in the enclosed Warranty, while "Indispensable Operating Safety Elements" are found under Point "4.2 Technical data".

4.4 Appropriate conditions of use

LIVI 902 is a door operator designed for installation on counterweight overhead doors for residential and industrial use as shown in F3 page 31. The standard counterweight overhead door consists of a single panel, equipped with side running rollers guided in vertical tracks. Counterweights are fastened to the rollers by means of chains or metal cables. LIVI 902 can also operate counterweight overhead door with rollers fastened to the panel end and with hinged panel. LIVI 902 cannot operate types of counterweight overhead doors that are not specifically mentioned (for example, doors working with traction springs or torsion springs instead of counterweight). We suggest to install one LIVI 902 door operator for galvanized sheet iron overhead doors consisting of a vertical deep crisp panel reinforced inside with horizontal bracings whose size does not exceed 9 sq m. We suggest to install two LIVI 902 in case of doors exceeding 9 sq mt or panels with pedestrian doors or insulated or matchboarded panel overhead doors. LIVI 902 is designed and tested for ope-

	902EN - 902EN/BF - 905NET - 905NET/P - 905NET/BF - 905NETP/BF	905NET/IP	902R	902R/EN/F	902/24EN - 902/24EN/BF - 905/24NET - 905/24NETP - 905/24NET/BF - 905/24NETP/BF
Motor power supply voltage (V)	230 V ~ ±10% (50/60 Hz)				24 V ===
Absorbed power (W)	300			180	80
Max torque (Nm)	295	162	150	180	180
Duty cycle (cycles/hour)	28	40	90	35	35
Maximum n° of operations in 24 hour	400	600	720	650	650
Built-in capacitor (µF)	8				-
Operating temperature range (°C)	-20÷40 °C				
Motor thermal protection (°C)	150 °C				-
Opening speed (rpm)	1,7	2,2	2,2	2,2	2,2
Weight of product with package (Kg)	11				10
Protection degree	IPX0	IP44	IPX0	IPX0	IPX0



ration under "normal" residential and industrial door opening conditions; temperature limits and levels of protection against dust and water, and other data are provided in "4.2 Technical data". Satisfactory operation requires proper positioning of LIVI 902 with respect to the overhead door; DEA System suggested sizes are shown in F3 page 31. The required automation must be selected according to the overhead door to be moved; when selecting the operator consider the rollers attrition on vertical tracks, weight, flatness, the structure general robustness and the overhead door surface, as well as the metal sheet thickness.

⚠ WARNING The use of the product under unusual conditions not foreseen by the manufacturer can create situations of danger, and for this reason all the conditions prescribed in these instructions must be respected.

⚠ WARNING Under no circumstances must the product be used in explosive atmospheres or surroundings that may prove corrosive and damage parts of the product.

⚠ WARNING The operator and/or its parts shall never be considered as support and/or safety devices for the overhead door. Make sure the overhead door is equipped with appropriate support and safety systems.

4.5 Instructions for risk-free operation

4.5.1 Transport

The LIVI 902 gate operator is always delivered packed in boxes that guarantee the product adequate protection. Carefully read any warnings or instructions for storage and handling provided on the box.

4.5.2 Installation, assembly and disassembly

The following operations are essential to the correct laying of the product:

- the careful definition of the entire automatic opening layout (see also "6 Complete Closing Assembly"); in particular, after carefully assessing the characteristics of the overhead door choose between welded or screwed installation; make sure there is enough space between the overhead door arms and the frame to install telescopic arms and eventually select bent telescopic arms (see F8 page 32). The necessity of installing reinforcement plates must be always carefully assessed, especially whenever the structure is weak; for instance when the metal sheet is thin or when the morphology of the door appears to lack solidity;
- fasten (weld or screw) the pipe support (A) (position the axle of the operator double splined shaft 100 mm away from the fulcrum of the overhead door) (see F3 page 31);
- introduce the pipe with bushing (C) in the operator, introduce the free end in the pipe support and after adjusting the pipe position with a level, trace the operator fixing plate position;
- fasten (by welding or screwing) the operator fixing plate (D) to the frame ;
- introduce again the pipe with bushing (C) and cut off the part in excess;

- fix (by welding or screwing) the pipe support (B) of the telescopic arm to the overhead door frame;
- weld the pipe with bushing (C) to the telescopic arm (E) and cut the latter to size (see F3 page 31);
- fasten the telescopic arm track (F) to the pipe support (B) and cut the arm track (F) to size (see F3 page 31), take the telescopic arm off. Then introduce the telescopic arm and (E) assemble again; If the operator is installed on an existing overhead door, adjust balance by adding up to the counterweights. Keep all welding seams well protected from corrosion.

⚠ WARNING All installation, maintenance, cleaning or repair operations on any part of the system must be performed exclusively by qualified personnel with the power supply disconnected working in strict compliance with the electrical standards and regulations in force in the nation of installation.

⚠ WARNING To ensure compliance with regulations and safe operation of the motor, we recommend to use **DEA** System control panels only.

4.5.3 Starting

The installation of the product requires masonry and/or welding and electrical connection operations using adequate equipment for the job in complete respect of the accident-prevention standards and regulations in force in the nation of installation.

This product must be connected electrically to a control panel for gate operators which is built-in in some models of LIVI 902; for more information please refer to this device instructions.

4.5.4 Use

The product is destined for incorporation in the assembly of devices that comprise the gate's automatism. **DEA** System assumes that it will always be used in compliance with the standards and regulations in force.

All LIVI 902 models have an unlocking system standard; just turn the release handle in the direction shown in F9 page 32 to activate it (the opposite procedure will return LIVI 902 to normal working conditions).

If, for whatever reason, you cannot reach the operator release system, install on all models LIVI 902 accessory 960 M "Release with cable", or, if it is sufficient, use the accessory 960 C "Holecover with Viro key for external release" and follow the instructions contained in the same.

The accessory 960 K, which allows you to connect the release to the handle of the overhead door, is available on all models; when you open it, LIVI 902 is unlocked, when you turn to close it LIVI 902 is locked; follow the instructions enclosed to 960K to install it. Use directions vary according to the type of lock installed on the overhead garage door.

4.5.5 Adjustment

The installation of series 900, 901 and 902 products does not require adjustments; the only adjustment required for the installation of series 903 products is the positioning of the stroke-end.

You can make such adjustments by unscrewing the fixing

"TROUBLE-SHOOTING" table

MALFUNCTION	CAUSES / SOLUTIONS
When the opening command is given, the overhead door fails to move and the operator's electric motor fails to start	The operator is not receiving correct power supply. Check all connections, fuses, and the power supply cable conditions and replace or repair if necessary
When the opening command is given, the motor starts but the overhead door fails to move	Check that the unlocking system is closed (see F9, page 32) Make sure that the electronic device for electric power adjustment is in good condition
The operator jerks during movement	If the overhead door of the gate does not move freely, release the piston and readjust the rotation points The gate operator, the tube supports or the telescopic arms have not been properly assembled; make a check of the assembly and rectify any inaccurate point



screws of the limit switch check cams and the limit switch cams (see F4, page 30), by rotating the latter along the cam holder up to the chosen position and by screwing on the screws again.

⚠ WARNING All the other adjustment/setting operations beyond the adjustment of the oil flow are made by the manufacturer. Tampering with these settings may cause malfunction and/or situations of risk to people, animals and property. Refrain from performing any operations not authorised by **DEA** System.

4.5.6 Maintenance and repair

Good preventive maintenance and regular inspection ensure long working life (see also "Warranty"). Consult the "TROUBLE-SHOOTING" table (see page 9) whenever anomalies are observed in order to find the solution to the problem and contact **DEA** System directly whenever the solution required is not provided.

The inspection/maintenance operations to be routinely scheduled in the "complete automatism maintenance register" are:

INTERVENTION TYPE	PERIODICITY
cleaning of external surfaces	6 months
checking of screw tightening	6 months
checking of release mechanism operation	6 months
greasing of articulated joint	1 year

⚠ WARNING All installation, maintenance, cleaning or repair operations on any part of the system must be performed exclusively by qualified personnel with the power supply disconnected working in strict compliance with the electrical standards and regulations in force in the nation of installation.

⚠ WARNING The use of spare parts not indicated by **DEA** System and/or incorrect re-assembly can create risk to people, animals and property and also damage the product. For this reason, always use only the parts indicated by **DEA** System and scrupulously follow all assembly instructions.

4.6 Training

After installation and setting, the correct operation of the complete automatism must be carefully illustrated to the final user.

The LIVI 902 gate operator requires careful instruction on the release mechanism (see "Enclosures") in particular and the respective maintenance schedule (see Point 4.5.6.).

⚠ WARNING Awareness of the operation of the LIVI 902 key-release mechanism (see F9 Page 32) is essential for all users of the automatism because the failure to use the device quickly during emergencies can jeopardise people, animals and property. Enclosure I to these instructions, which the installer is required to deliver to the final user, illustrates operation and can be detached.

4.7 Inappropriate use

Chapter "4.4 Appropriate conditions of use" describes the conditions for which the product has been designed and tested. The product must never be used for other purposes.

⚠ WARNING The use of the product under unusual conditions not foreseen by the manufacturer can create situations of danger, and for this reason all the conditions prescribed in these instructions must be respected.

⚠ WARNING Under no circumstances must the product be used in explosive atmospheres or surroundings that may prove corrosive and damage parts of the product.



5 SPARE PARTS LIST

The list of spare parts that can be ordered (Page 33) is a detailed list that accompanies the exploded view of the product and must be used to order spare parts.

The following data must always be provided when ordering spare parts:

- the code of the product (seen on the product label; see F5, Page 30),
- the part's position number in the exploded view,
- if available, the product's purchase date may be useful in some cases.



6 COMPLETE CLOSING ASSEMBLY

This chapter illustrates the typical installation of a complete automatism for the purpose of informing and assisting the installer in the selection of the various parts to be used in compliance with Machinery Directive (2006/42/CE) and European Safety Standards (EN 12453 - EN 12445) for gate installation.

The data provided in this chapter are neither complete nor exhaustive, and **DEA** System declines all liability for any errors, omissions or inaccuracies that may occur.

6.1 Minimum level of protection provided by the safety edge

Among the most serious risks to be considered for the automation of a overhead door there is the risk of impact and of being crushed on the lower closing edge. Regulations prescribe the adoption of one of the following types of controls against such risks depending on the use foreseen for the gate.

An appropriate type of operating control board must be used according to the gate type and use against such risk, as provided for by the quoted regulations (see "OPERATING CONTROL" table).

6.2 Risk of scissoring on side arms

The risk of scissoring on side arms is a relevant risk on automated overhead doors. The above-mentioned regulations prescribe the adoption of one of the following solutions against this risk:

- make sure there is no point of scissoring between the telescopic arms and the door arms or with the frame or with the door;
- use adequate protection for your hands in the area;
- if the installation is in a private home which does not give onto a public area and there is no timer-set automatic closing this protection is not required.

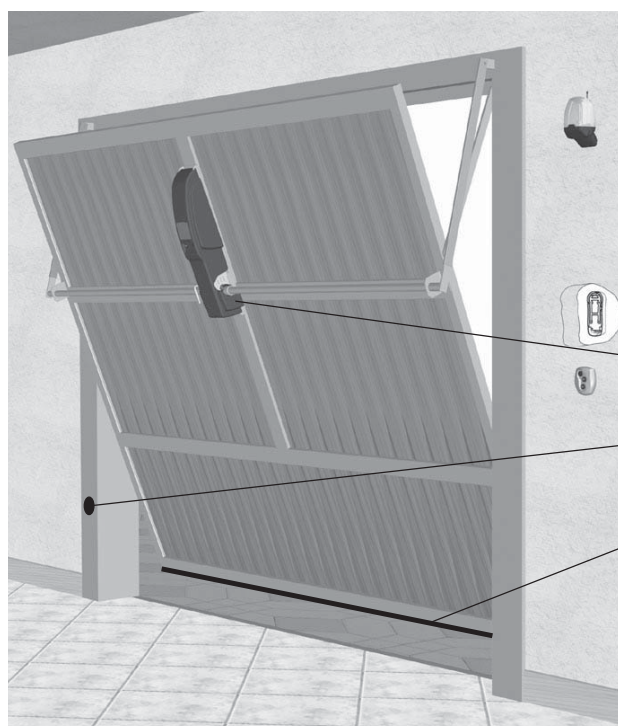
6.3 Impact on the lower closing edge

In order to avoid crushing by the door wing in the closing area, install a pair of photocells (A) (recommended height: 200mm) in order to detect the presence of the test parallelepiped (B) (height: 300 mm) positioned as shown in F11 on Page 32. Note. The presence detection test sample is a parallelepiped with 3 sides with light-coloured reflecting surfaces and 3 sides with dark-coloured, opaque surfaces.

In order to further reduce the risk of impact with the gate wing in the opening area, an extra pair of photocells (C) (recommended height: 1000 mm).



“EXAMPLE OF TYPICAL INSTALLATION” picture



Pos.	Description
1	102 Lux key selector
2	Remote-control
3	Safety edge
4	104 Lux series photocells
5	LIVI 902

⚠ WARNING when a pedestrian access is present and can be opened while gate/door is moving, adopt a limit switch granting the pedestrian door closing state during gate/door movement and that maintains the protective function also in case of limit switch failure. At this aim, connect a micro switch NO (normally opened) between STOP and COM clamps of the control boards.

STOP and GO switches function (if present)

Fast inversion		Step by Step	
	Motor start or inversion		Start and stop
	Motor stop		Motor stop

“OPERATING CONTROL” table

Type of control	Type of use		
	Informed users (private areas)	Informed users (public areas)	Uninformed users
Person-present control	Pushbutton control	Pushbutton control with key	The person-present control is not possible
Pulse control with the gate in sight	Force limitation or presence detectors	Force limitation or presence detectors	Force limitation and photocells or presence detectors
Pulse control with the gate not in sight	Force limitation or presence detectors	Force limitation and photocells or presence detectors	Force limitation and photocells or presence detectors
Automatic control (i.e. control with timed closing)	Force limitation and photocells or presence detectors	Force limitation and photocells or presence detectors	Force limitation and photocells or presence detectors

RESPONSIBILITIES OF THE INSTALLER

Remember that anyone who sells and/or motorises doors/gates becomes the manufacturer of the automatic door/gate machine and must therefore prepare and conserve a **technical folder** that contains the following documents (see Machinery Directive Enclosure V):

- Assembly drawing of the automatic door/gate;
- Electrical connection and control circuit wiring diagram;
- Risk analysis including: a list of the essential safety requirements provided in Machinery Directive Enclosure I; a list of the risks posed by the door/gate and the description of the solutions adopted.
- Keep these operating instructions in a safe place together with the instructions for all the other components;
- Prepare these operating instructions and general safety warnings (for the completion of these operating instructions) and deliver a copy to the final user;
- Fill out the maintenance register and deliver a copy to the final user;
- Fill out the complete label or plate and apply it to the door/gate.

Note: The technical folder must be conserved for inspection by the competent national authorities for at least ten years from the date construction of the automatic door/gate.



Esempio di installazione tipica - Example of typical installation - Exemple d'installation typique

Ejemplo de instalación típica - Exemplo de instalação típica

DEA System fornisce queste indicazioni che si possono ritenere valide per un impianto tipo ma che non possono essere complete. Per ogni automatismo, infatti, l'installatore deve valutare attentamente le reali condizioni del posto ed i requisiti dell'installazione in termini di prestazioni e di sicurezza; sarà in base a queste considerazioni che redigerà l'analisi dei rischi e progetterà nel dettaglio l'automatismo. - **DEA** System provides the following instructions which are valid for a typical system but obviously not complete for every system. For each automatism the installer must carefully evaluate the real conditions existing at the site. The installation requisites in terms of both performance and safety must be based upon such considerations, which will also form the basis for the risk analysis and the detailed design of the automatism. - **DEA** System fournit ces indications que vous pouvez considérer comme valables pour une installation-type, même si elles ne peuvent pas être complètes. En effet, pour chaque automatisé, l'installateur doit évaluer attentivement les conditions réelles du site et les pré-requis de l'installation au

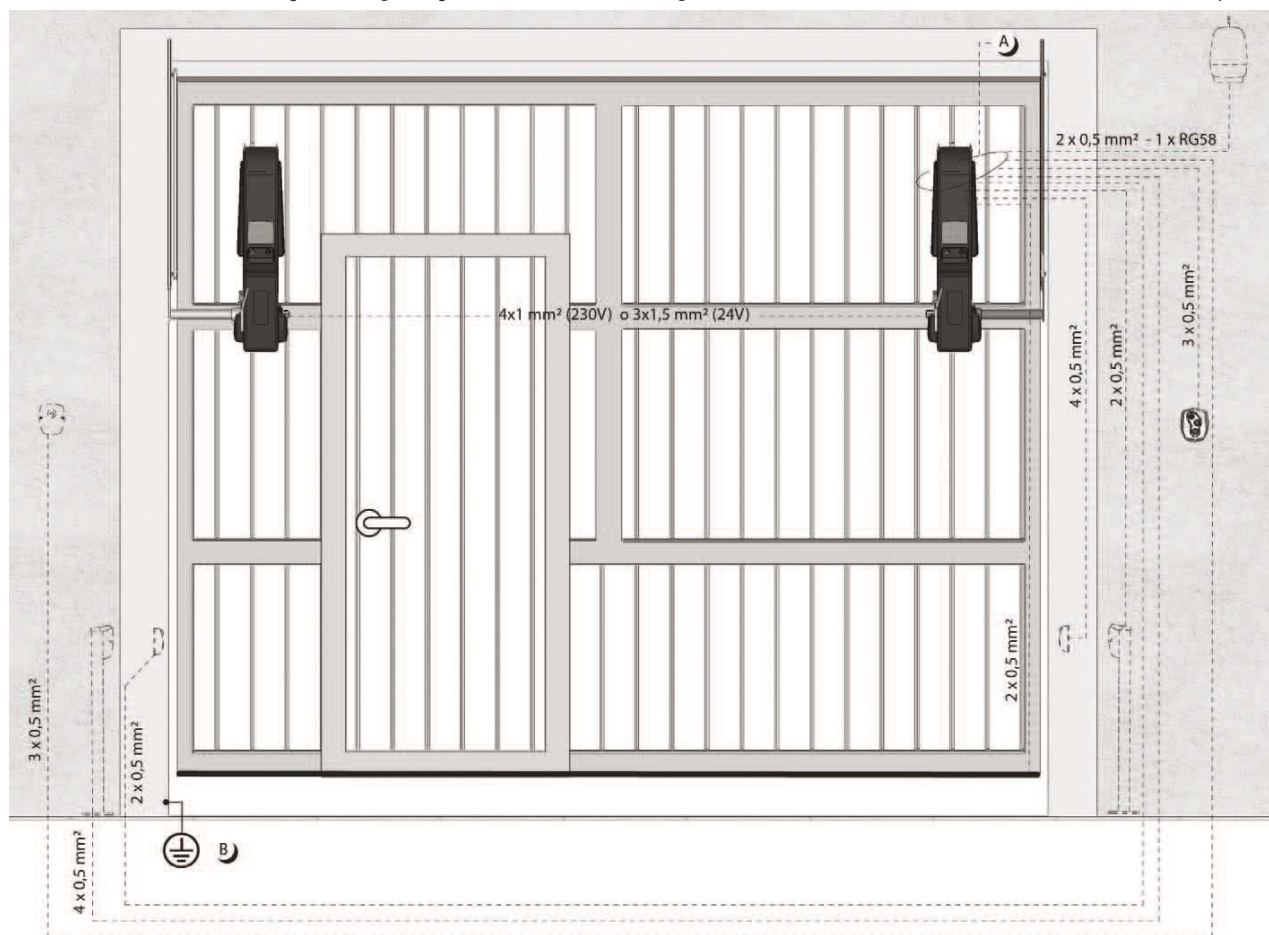
point de vue performances et sécurité ; c'est sur la base de ces considérations qu'il rédigera l'analyse des risques et qu'il concevra l'automatisation d'une manière détaillée. - **DEA** System facilita estas indicaciones que pueden considerarse válidas para una instalación tipo pero que no pueden considerarse completas. El instalador, en efecto, tiene que evaluar atentamente para cada automatismo las reales condiciones del sitio y los requisitos de la instalación por lo que se refiere a prestaciones y seguridad; en función de estas consideraciones redactará el análisis de riesgos y efectuará el proyecto detallado del automatismo. - **DEA** System fornece estas indicações que podem ser consideradas válidas para o equipamento padrão, mas que podem não ser completas. Para cada automatismo praticamente o técnico de instalação deverá avaliar com atenção as condições reais do sítio e os requisitos da instalação em termos de performance e de segurança; será em função destas considerações que realizará uma análise dos riscos e projectará o

Per un corretto uso ai fini della sicurezza il motore deve essere collegato unicamente ad una centrale di comando Dea System. To ensure proper and safe use of operators, connect them only to Dea System control panels.

Afin d'assurer un emploi correct au point de vue de la sécurité, le moteur doit être branché à une armoire de commande Dea System.

Para un empleo correcto en cuanto a seguridad, el motor tiene que conectarse exclusivamente a una central de control Dea System.

Para um uso certo em relação à segurança, o motor deve ser ligado unicamente a uma central de comando Dea System.



- A Collegarsi alla rete 230 V $\pm$ 10% 50 Hz tramite un interruttore onnipolare o altro dispositivo che assicuri la onnipolare disinserzione della rete, con una distanza di apertura dei contatti $\geq$ 3,5 mm - Make the 230V $\pm$ 10% 50 Hz mains connection using an omnipolar switch or any other device that guarantees the omnipolar disconnection of the mains network with a contact opening distance of 3,5 mm - Connectez-vous au réseau 230 V $\pm$ 10% 50 Hz au moyen d'un interrupteur onnipolaire ou d'un autre dispositif qui assure le débranchement onnipolaire du réseau, avec un écartement des contacts égal à 3,5 mm. - Efectuar la conexión a una línea eléctrica 230 V $\pm$ 10% 50 Hz a través de un interruptor onnipolar u otro dispositivo que asegure la onnipolar desconexión de la línea, con 3,5 mm de distancia de abertura de los contactos. - Ligue na rede de 230 V. $\pm$ 10% 50 Hz mediante um interruptor onnipolar ou outro dispositivo que assegure que se desliga de maneira onnipolar da rede, com abertura dos contactos de pelo menos 3,5 mm. de distância

- B Collegare a terra tutte le masse metalliche - All metal parts must be grounded - Connectez toutes les masses métalliques à la terre - Conectar con la tierra todas las masas metálicas - Realize ligação à terra de todas as massas metálicas

La lunghezza dei conduttori deve essere tale che i conduttori attivi si tendano prima del conduttore di messa a terra. - The conductors length has to be such as that active conductors get tightened before the grounding conductor. - La longueur des conducteurs doit être tel que les conducteurs actifs se tendent avant du conducteur de masse mis à terre. - El largo de los conductores deben ser tal que los conductores activos se tensen antes de los conductores de masa a tierra. - O comprimento dos condutores tem que ser tal que os condutores activos se tendam antes do condutor de massa a terra.



Lista parti ordinabili, Spare parts list, Liste pièces ordonnables, Lista partes que pueden encargarse,
Lista para pedido de peças de reposição

cod. 310350 bloccetto
unblocking block
bloc de déverrouillage
bloco de desbloqueio

cod. 310350A leva sblocco
release handle
poignée de déverrouillage
manilla desbloqueo
puxador desbloqueio

cod. 933080I encoder
encoder
encodeur
encoder

cod. 933080D carter
case
carter
tampa

cod. 933070H cassa riduttore
gearmotor casing
caisson reducteur
caixa do redutor

cod. 677040 centrale di comando - art. 904
control board - art. 904
central de commande - art. 904
central de mando - art. 904
quadro de comando - art. 905
control board - art. 905
armoire de commande - art. 905
central de mando - art. 905
quadro de comando - art. 903E
control board - art. 903E
armoire de commande - art. 903E
central de mando - art. 903E
quadro de comando - art. 905/24
control board - art. 905/24
armoire de commande - art. 905/24
central de mando - art. 905/24
quadro de comando - art. 905/24

cod. 677070 centrale di comando - art. 905
control board - art. 905
armoire de commande - art. 905
central de mando - art. 905
quadro de comando - art. 903E
control board - art. 903E
armoire de commande - art. 903E
central de mando - art. 903E
quadro de comando - art. 905/24
control board - art. 905/24
armoire de commande - art. 905/24
central de mando - art. 905/24
quadro de comando - art. 905/24

cod. 677110 centrale di comando - art. 903E
control board - art. 903E
armoire de commande - art. 903E
central de mando - art. 903E
quadro de comando - art. 905/24
control board - art. 905/24
armoire de commande - art. 905/24
central de mando - art. 905/24
quadro de comando - art. 905/24

cod. 678090 quadro de comando - art. 903E
central de mando - art. 903E
quadro de comando - art. 905/24
control board - art. 905/24
armoire de commande - art. 905/24
central de mando - art. 905/24
quadro de comando - art. 905/24

cod. 933170T piastra porta quadro - art. 24V
control board support plate - art. 24V
plaque porte cadre - art. 24V
soporte ficha electrónica - art. 24V
suporte placa eléctrica - art. 24V

cod. 162101 transformatore
transformer
transformateur
transformador

cod. 933040E finecorsa
limit switch
fin de course
fin de carrera
fim de curso

cod. 164008 microinterruttore
microswitch
microinterrupteur
microinterruptor
micro-interruptor

cod. 470300 calotte+statore - non rev.
cover+stator - not rev.
calotte+stator - non rev.
caja+estator - no rev.
calotte+stator - ndo rev.
cover+stator - rev. / slow
calotte+stator - rev. / lent
caja+estator - rev. / lento
caja+estator - rev. / lento

cod. 933011 calotte+statore - rev. / lento
cover+stator - rev. / slow
calotte+stator - rev. / lent
caja+estator - rev. / lento
caja+estator - rev. / lento

cod. 184014 pulsante nero
black button
bouton noir
botón negro
botão preto

cod. 184015 pulsante rosso
red button
bouton rouge
botón rojo
botão vermelho

cod. 933230W piastrina porta pulsanti
switches holder clamp
plaque porte poussoirs
chapa porta-botões
botoeira

cod. 430560 sacchetto accessori
accessories small bag
sachet accessoires
bolita accesorios
saco de accesorios

cod. 933190V supporto scheda
electronic card support
supporte carte électronique
soporte ficha electrónica
suporte placa eléctrica

cod. 330590 albero+ingranaggio
shaft+gear
arbre+engrenage
eje+engranaje
veio+engrenagem

cod. 923450F leva sblocco
release handle
poignée de déverrouillage
manilla desbloqueo
puxador desbloqueio

cod. 933202C sblocco interno - non rev.
internal unblocking device - non rev.
déverrouillage intérieur - non rev.
desbloqueo interno - non rev.
desbloqueo interno - non rev.
internal unblocking device - rev.
déverrouillage intérieur - rev.
desbloqueo interno - rev.
desbloqueo interno - rev.

cod. 933021C sblocco interno - non rev.
internal unblocking device - non rev.
déverrouillage intérieur - non rev.
desbloqueo interno - non rev.
desbloqueo interno - non rev.
internal unblocking device - rev.
déverrouillage intérieur - rev.
desbloqueo interno - rev.
desbloqueo interno - rev.

cod. 933180U piastrina porta lampada
lamp support
support lampe
soporte bombilla
suporte lâmpada

cod. 170012 lampadina
bulb
ampoule
bombilla
lâmpada

cod. 170003 lampadina
bulb
ampoule
bombilla
lâmpada

cod. 933130P piastrina porta lampada
lamp support
support lampe
soporte bombilla
suporte lâmpada

cod. 933060G albero motore - non rev.
motor shaft - not rev.
arbre moteur - non rev.
eje motor - no rev.
veio do motor - não rev.
motor shaft - rev.
arbre moteur - rev.
eje motor - rev.
veio do motor - rev.

cod. 933061G albero motore - art. with encoder
motor shaft - art. with encoder
arbre moteur - art. avec encodeur
eje motor - art. con encoder
veio do motor - art. com encoder

cod. 933180U vite senza fine+spina
worm screw+pin
vis sans fin+goupille
tornillo sinfin+clavija
parafuso sem fin+ficha

cod. 933090M motore 24V
24V motor
moteur 24V
motor 24V
motor de 24V

cod. 933062G albero motore - art. con encoder
motor shaft - art. with encoder
arbre moteur - art. avec encodeur
eje motor - art. con encoder
veio do motor - art. com encoder

Esplso raggruppato LVI 900 Serie 3 - LVI 550Pl Rev. 01

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DEA LIVI 902



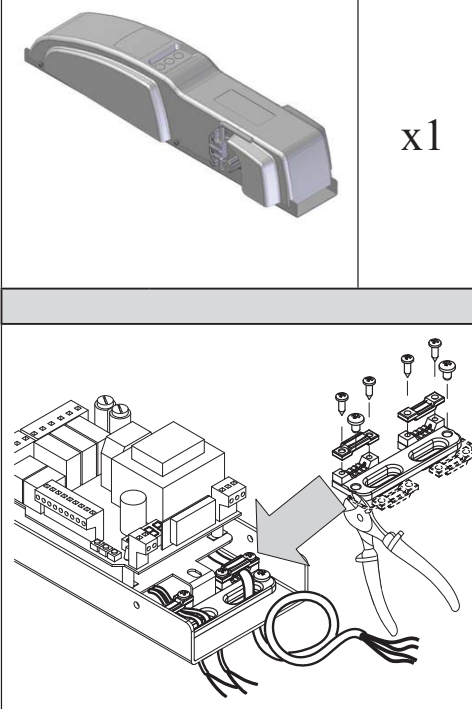
Lista parti ordinabili, Spare parts list, Liste pièces ordonnables, Lista partes que pueden encargarse, Lista para pedido de peças de reposição

cod. 933030D ingranaggio doppio double gear engrenage double engranaje doble engranagem dupla cod. 330650 albero scanalato splined shaft arbre cannelé eje acanalado veio canelado cod. 121013 cuscinetto bearing coussinet cojinete rolamento cod. 156028 o-ring o-ring joint d'étanchéité o-ring o-ring	cod. 9331200 carter - art. 902 case - art. 902 carter - art. 902 càrter - art. 902 tampa - art. 902
cod. 9331605 piastra porta quadro - art. 230V control board support plate - art. 230V plaque porte cadre - art. 230V soporte ficha electrónica - art. 230V suporte placa eléctrica - art. 230V	cod. 933110N carter - art. 900 case - art. 900 carter - art. 900 càrter - art. 900 tampa - art. 900
cod. 933150R piastra di fondo - art. 900 L=610mm bracket - art. 900 L=610mm attache - art. 900 L=610mm conexión - art. 900 L=610mm suporte - art. 900 L=610mm cod. 933151R piastra di fondo - art. 900 L=1300mm bracket - art. 900 L=1300mm attache - art. 900 L=1300mm conexión - art. 900 L=1300mm suporte - art. 900 L=1300mm cod. 933152R piastra di fondo - art. 902 L=675mm bracket - art. 902 L=675mm attache - art. 902 L=675mm conexión - art. 902 L=675mm suporte - art. 902 L=675mm cod. 933153R piastra di fondo - art. 902 L=1300mm bracket - art. 902 L=1300mm attache - art. 902 L=1300mm conexión - art. 902 L=1300mm suporte - art. 902 L=1300mm	cod. 923440E piastra di fondo bracket attache conexión suporte

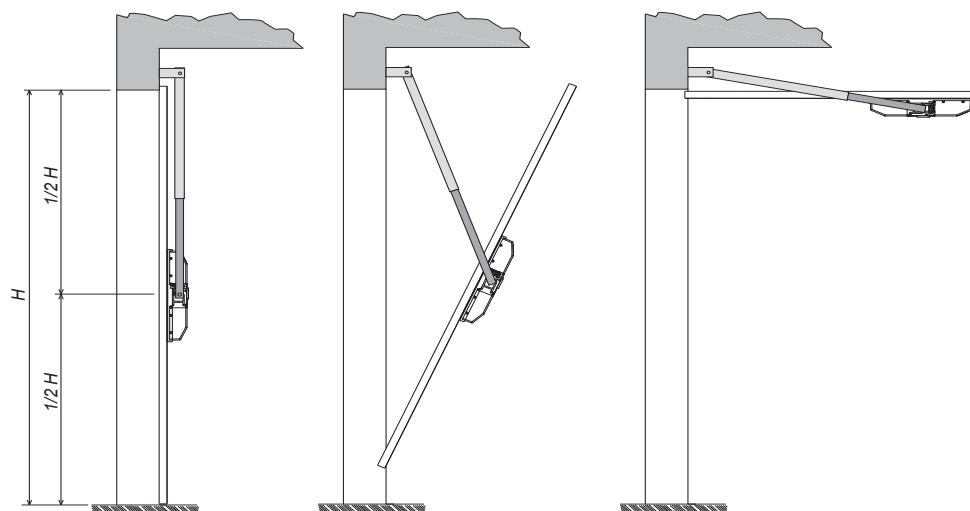


Contenuto dell'imballo
Contents of the package
Contenu de l'emballage
Contenido del embalaje
Conteúdo da embalagem

Tutti gli articoli, All articles, Tous articles,
Todos los artículos, Todos os artigos

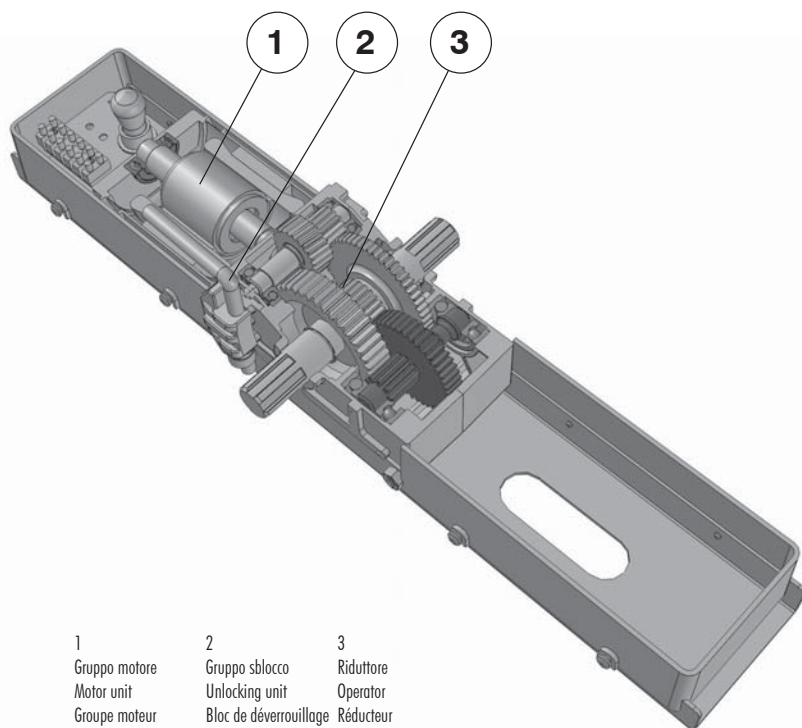


F6.1 Porta non debordante, Counterweight door, Porte non débordante, Puerta no desbordante, Porta não transbordante



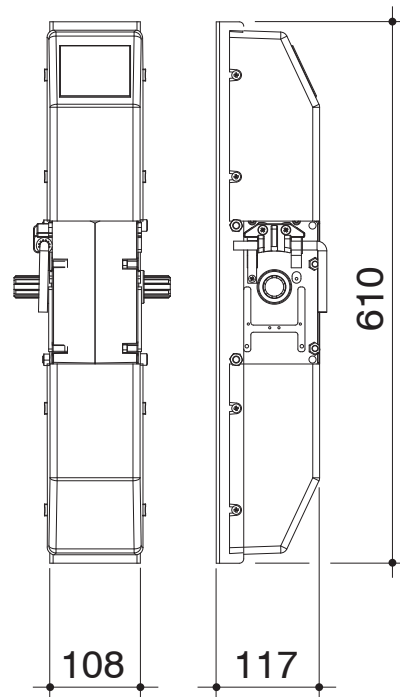


F1 Elementi del prodotto, Product elements, Eléments du produit, Elementos del producto, Elementos do produto

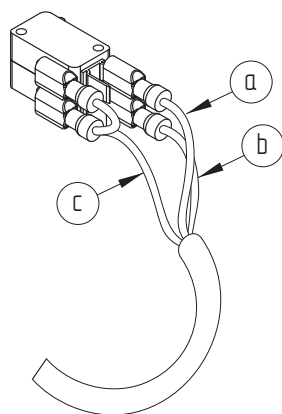
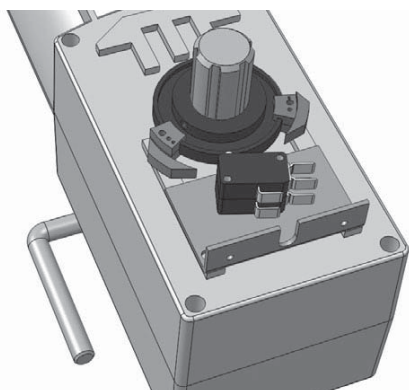


- | | | |
|----------------|------------------------|-----------|
| 1 | 2 | 3 |
| Gruppo motore | Gruppo sblocco | Riduttore |
| Motor unit | Unlocking unit | Operator |
| Groupe moteur | Bloc de déverrouillage | Réducteur |
| Grupo motor | Grupo desbloqueo | Reductor |
| Grupo do motor | Grupo de desbloqueio | Redutor |

F2 Ingombri prodotto, Product dimensions, Espaço ocupado por el producto,

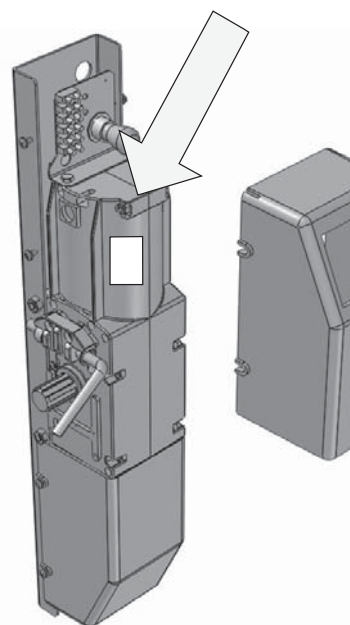


F4 Regolazione finecorsa, Limit switch adjustment, Réglage fin de course, Regulación tope, Regulação do final de percurso.



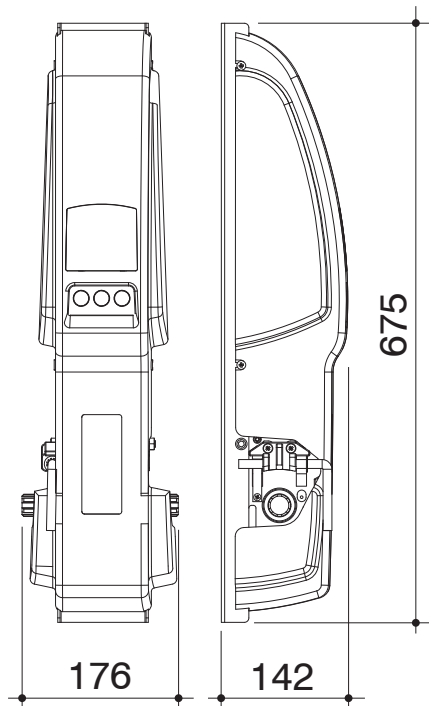
- a- marrone = finecorsa apertura
a- brown = limit switches in opening
a- marron = fin de course en ouverture
a- marrón = tope abertura
a- castanho = final de percurso de abertura
- b- nero = finecorsa chiusura
b- black = limit switches in closing
b- noir = fin de course en fermeture
b- negro = tope cierre
b- preto = final de percurso de fechamento
- c- blu = comune comandi
c- blue = common for the controls
c- bleu = commune des commandes
c- azul = común mandos
c- azul = comum dos comandos

F5 Posizione etichetta, Label position, Posição da

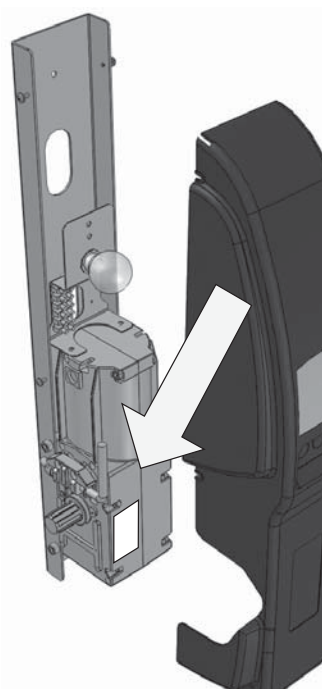




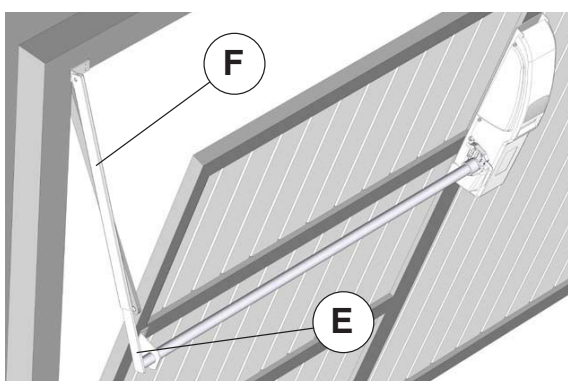
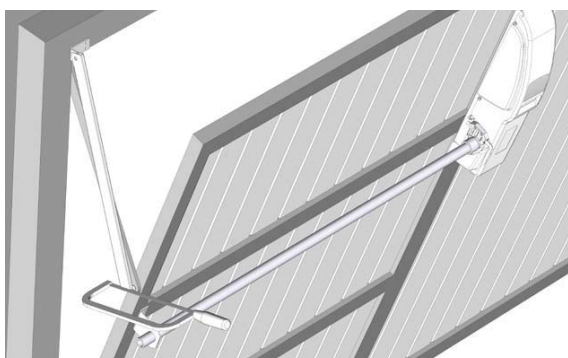
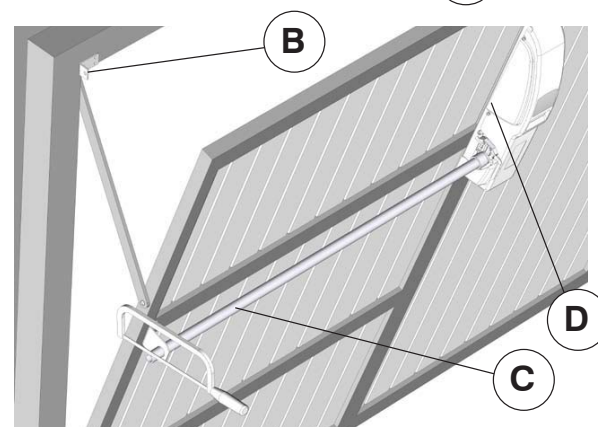
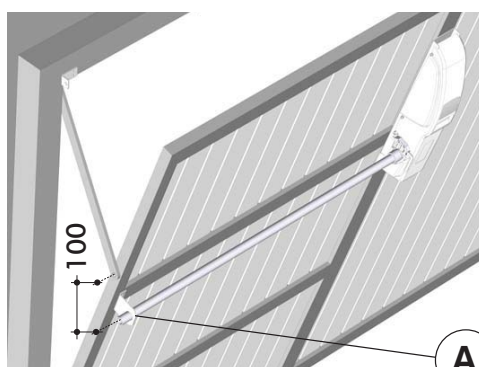
Cotes d'encombrement du produit,
Medidas máximas do produto



Position étiquette, Posición etiqueta,
etiqueta



F3 Misure installazione, Installation measurements,
Mesures pour l'installation, Medidas instalación,
Medidas para instalação

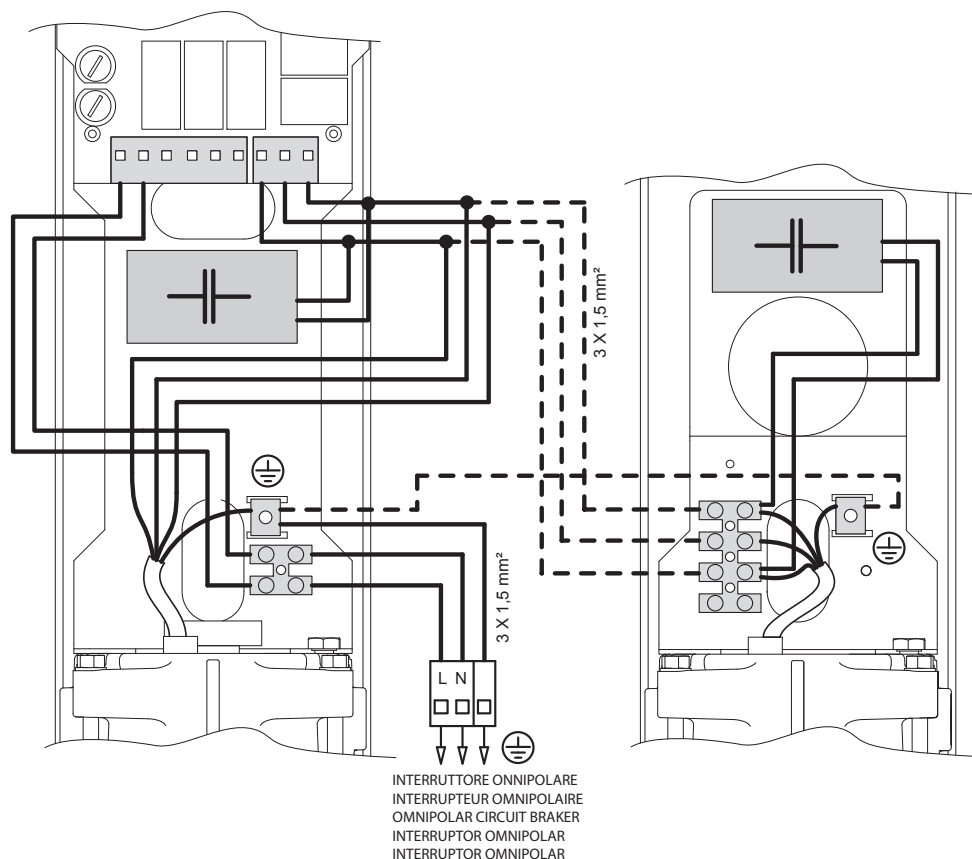




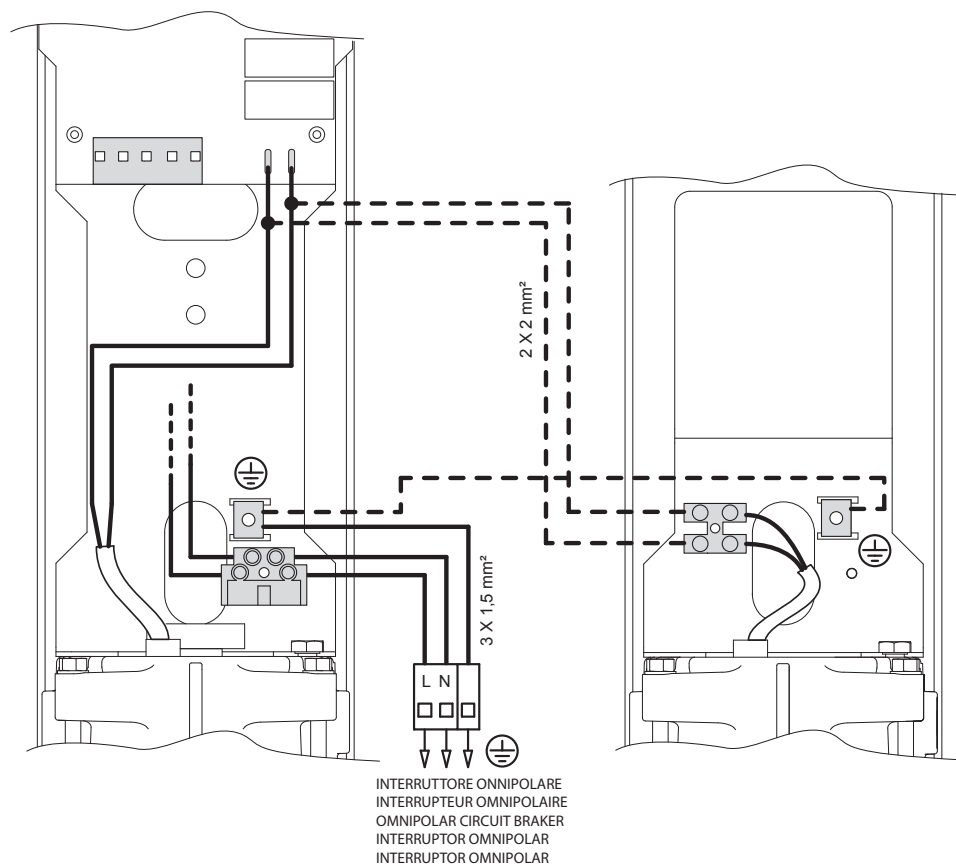
F6 Porta snodata a libro, Folding hinged door, portes articulée ouvrante, Puerta abatible plegable, Porta articulada dobrando-se		
F8 Braccio telescopico curvo, Curved telescopic arm, Bras télescopique coudé, Brazo telescópico curvado, Braço telescópico curvado	F9 Sblocco manuale, Manual release, Déverrouillage manuel, Desbloqueo manual, Desbloqueio manual	F11 Distanze installazione fotocellule, Photocell installation distances, Distances installation photocellules, Distancias instalación fotocélulas, Distância da instalação das fotocélulas



Schema elettrico per il collegamento di alimentazione e del secondo motore 230 V ~ (se presente). Per le altre connessioni fare riferimento allo schema elettrico del quadro di comando (if present). For all other connections, refer to the control panel circuit diagram.
Schéma de câblage pour le branchement de l'alimentation et du second moteur 230V ~ (si présent). Pour les autres connexions se référer au diagramme électrique de l'armoire de commande.
Esquema eléctrico para la conexión de alimentación y del segundo motor 230 V ~ (si presente). Para las demás conexiones, referirse al esquema eléctrico del cuadro de mando.
Esquema eléctrico para a ligação de alimentação e do segundo motor 230 V ~ (se presente). Para as outras ligações fazer referência ao esquema eléctrico da central de comando



Schema elettrico per il collegamento di alimentazione e del secondo motore 24 V ~ (se presente). Per le altre connessioni fare riferimento allo schema elettrico del quadro di comando (if present). For all other connections, refer to the control panel circuit diagram.
Schéma de câblage pour le branchement de l'alimentation et du second moteur 24V ~ (si présent). Pour les autres connexions se référer au diagramme électrique de l'armoire de commande.
Esquema eléctrico para la conexión de alimentación y del segundo motor 24 ~ (si presente). Para las demás conexiones, referirse al esquema eléctrico del cuadro de mando.
Esquema eléctrico para a ligação de alimentação e do segundo motor 24 V ~ (se presente). Para as outras ligações fazer referência ao esquema eléctrico da central de comando



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