

RAY

Linear gear motor for swing gates
Motoriduttore lineare per cancelli a battente
Motoréducteur linéaire pour portails à battants
Motorreductor lineal para cancelas batientes
Lineargetriebemotor für Drehtore
Motorreductor linear para portões de batente
Liniowy motoreduktor do bram skrzydłowych



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1 - SAFETY WARNINGS

ATTENTION !

ORIGINAL INSTRUCTIONS - important safety instructions. Follow the instructions since incorrect installation can lead to severe injury! Save these instructions.

Read the instructions carefully before proceeding with installation.

The design and manufacture of the devices making up the product and the information in this manual are compliant with current safety standards. However, incorrect installation or programming may cause serious injury to those working on or using the system. Compliance with the instructions provided here when installing the product is therefore extremely important.

If in any doubt regarding installation, do not proceed and contact the Key Automation Technical Service for clarifications.

Under European legislation, an automatic door or gate system must comply with the standards envisaged in the Directive 2006/42/EC (Machinery Directive) and in particular standards EN 12453; EN 12635 and EN 13241-1, which enable declaration of presumed conformity of the automation system.

Therefore, final connection of the automation system to the electrical mains, system testing, commissioning and routine maintenance must be performed by skilled, qualified personnel, in observance of the instructions in the "Testing and commissioning the automation system" section.

The aforesaid personnel are also responsible for the tests required to verify the solutions adopted according to the risks present, and for ensuring observance of all legal provisions, standards and regulations, with particular reference to all requirements of the EN 12453 standard which establishes the test methods for testing door and gate automation systems.

ATTENTION !

Before starting installation, perform the following checks and assessments:

ensure that every device used to set up the automation system is suited to the intended system overall. For this purpose, pay special attention to the data provided in the "Technical specifications" section. Do not proceed with installation if any one of these devices is not suitable for its intended purpose;

check that the devices purchased are sufficient to guarantee system safety and functionality;

perform a risk assessment, including a list of the essential safety requirements as envisaged in Annex I of the Machinery Directive, specifying the solutions adopted. The risk assessment is one of the documents included in the automation system's technical file. This must be compiled by a professional installer.

Considering the risk situations that may arise during installation phases and use of the product, the automation system must be installed in compliance with the following safety precautions:

never make modifications to any part of the automation system other than those specified in this manual. Operations of this type can only lead to malfunctions. The manufacturer declines all liability for damage caused by unauthorised modifications to products;

if the power cable is damaged, it must be replaced by the manufacturer or its after-sales service, or in all cases by a person with similar qualifications, to prevent all risks;

do not allow parts of the automation system to be immersed in water or other liquids. During installation ensure that no liquids are able to enter the various devices;

should this occur, disconnect the power supply immediately and contact a Key Automation Service Centre. Use of the automation system in these conditions may cause hazards;

never place automation system components near to sources of heat or expose them to naked lights. This may damage system components and cause malfunctions, fire or hazards;

ATTENTION !

The drive shall be disconnected from its power source during cleaning, maintenance and when replacing parts. If the disconnect device is not in a visible location, affix a notice stating: "MAINTENANCE IN PROGRESS":

connect all devices to an electric power line equipped with an earthing system;

the product cannot be considered to provide effective protection against intrusion. If effective protection is required, the automation system must be combined with other devices;

the product may not be used until the automation system "commissioning" procedure has been performed as specified in the "Automation system testing and commissioning" section;

the system power supply line must include a circuit breaker device with a contact gap allowing complete disconnection in the conditions specified by class III overvoltage;

use unions with IP55 or higher protection when connecting hoses, pipes or cable glands;

the electrical system upstream of the automation system must comply with the relevant regulations and be constructed to good workmanship standards;

this appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved;

before starting the automation system, ensure that there is no-one in the immediate vicinity;

before proceeding with any cleaning or maintenance work on the automation system, disconnect it from the electrical mains;

special care must be taken to avoid crushing between the part operated by the automation system and any fixed parts around it; children must be supervised to ensure that they do not play with the equipment.

that the drive cannot be used with a driven part incorporating a wicket door unless the drive can only be operated with the wicket door in the safe position;

ATTENTION !

Frequently examine the installation for imbalance where applicable and signs of wear or damage to cables, springs and mounting. Do not use if repair or adjustment is necessary.

ATTENTION !

Packaging components (cardboard, plastic, etc.), duly separated, must be placed in the appropriate bins. Device components such as electronic boards, metal parts, batteries, etc. must be separated and differentiated. For the methods of disposal, the rules in force in the place of installation must be applied. DO NOT DISPOSE IN THE ENVIRONMENT!



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2 - PRODUCT OVERVIEW

2.1 - Description of the product

RAY gear motors are destined to be installed in systems for the automation of gates with hinged doors.
RAY gear motors have been designed and constructed to be fitted onto hinged doors within the weight limits indicated in the technical

specifications table.
The use of gear motors for applications which differ from those indicated above is prohibited.

2.2 - Model and technical characteristics

CODE	DESCRIPTION
RAY2524	Gear motor for hinged doors with max length 3 m or max weight 500 kg, 24 Vdc
RAY4024E	Gear motor for hinged doors with max length 4 m or max weight 600 kg with encoder, 24 Vdc
RAY4224E	Gear motor for hinged doors with max length 4 m or max weight 600 kg with encoder, 24 Vdc
RAY40	Gear motor for hinged doors with max length 4 m or max weight 600 kg, 230 Vac
RAY40L	Gear motor for hinged doors with max length 4 m or max weight 600 kg, 230 Vac, slow
RAY2224	Gear motor for hinged doors with max length 3 m or max weight 300 kg, 24 Vdc
RAY4024R	Gear motor for hinged doors with max length 4 m or max weight 500 kg, 24 Vdc, reversible
RAY3024F	Gear motor for hinged doors with max length 3 m or max weight 300 kg, 24 Vdc with encoder, fast

TECHNICAL DATA		MODEL							
		RAY2524	RAY4024 RAY4024E	RAY4224E	RAY40	RAY40L	RAY2224	RAY4024R	RAY3024F
TECHNICAL SPECIFICATIONS	Speed	2,6 cm/s	1,5 cm/s	1,5 cm/s	1,6 cm/s	1 cm/s	2,6 cm/s	3 cm/s	3,8 cm/s
	Thrust force	1500 N	2000 N	2000 N	2000 N	1800 N	1500 N	1000 N	1000 N
	Cycle/hour *	40	40	40	25	16	40	40	40
	Opening time at 90°	18-25**	20-25**	20-25**	20-25**	32-40**	18-25**	15-20**	10-15**
	Working stroke	415 mm							
	Control board	14AB	14AB2	CT20324	CT202	CT202	CT20324	14AB2	14AB2F
	Power supply	24 Vdc	24 Vdc	24 Vdc	230 Vac 50/60 Hz		24 Vdc		
	Absorption	3,5 A	5 A	5 A	1,2 A	1,3 A	3,5 A	5 A	5 A
	Engine power	85 W	120 W	120 W	280 W	300 W	85 W	120 W	120 W
	Capacitor	-	-	-	8 µF	8 µF	-	-	-
	Thermoprotection	-	-	-	150 °C	150 °C	-	-	-
	Integrated lights	si	si	no	-	-	-	si	si
	Degree of protection	IP44							
	Dimensions (L - P - H)	844-100-104 mm							
	Weight	6 kg	8 kg	8 kg	8 kg	8 kg	6 kg	8 kg	8 kg
	Operating temperature	-20°+55°C							
	Noise emission level	≤ 70dB(A)							

* with non-panelled door at a temperature of 20°C

** with optimized fixing dimensions

3 - PRELIMINARY CHECKS

Before installing this product, verify and check the following steps:

- Check that the gate or door are suitable for automation
- The weight and size of the gate or door must be within the maximum permissible operating limits specified in Fig. 2
- Check the presence and strength of the security mechanical stops of the gate or door
- Check that the mounting area of the product is not subject to flooding
- Conditions of high acidity or salinity or proximity to heat sources could cause malfunction of the product
- Extreme weather conditions (for example the presence of snow, ice, high temperature range, high temperatures) may increase the friction and therefore the force required for the handling and initial

starting point may be higher than under normal conditions.

- Check that the manual operation of gate or door is smooth and friction-free and there is no risk of derailment of the same
- Check that the gate or door are in equilibrium and stationary if left in any position
- Check that the power line to supply the product is equipped with proper grounding safety and protected by a magnetothermal and differential security device
- Provide the power system with a disconnecting device with a gap of contacts enabling full disconnection under the conditions dictated by the overvoltage category III.
- Ensure that all materials used for the installation comply with current regulations

4 - PRODUCT INSTALLATION

4.1 - Installation

⚠ ATTENTION !

The installer must verify that the working temperature range stated on the automation device is suitable for the location where it is installed.

⚠ ATTENTION !

The automation system must be equipped with a pressure-sensitive edge protecting all possible crushing points (hands, feet, etc.) in accordance with the requirements of the EN 13241-1 standard.

⚠ ATTENTION !

The gate must have limit stops in the open and closed positions which prevent it from travelling over the permitted limits.

Before proceeding with the installation, check the integrity of the product and that all components are present in the package (Fig. 3). Also make sure that the mounting area of the gear motor is Also check that the gearmotor's installation zone is compatible with its overall dimensions (Fig.1).

Check the opening angle permitted by the bracket fixing points using the graph in Fig.4 for inward opening. For outward opening, refer to the graph in Fig.4.1.

Fig.6 shows a typical installation:

Gear motors (1)
Photocells (2)
Columns for photocells (3)
Flashing light with antenna (4)
Key switch or digital keypad (5)
Control unit (6)
Pressure-sensitive edge (7)

4.2 - Installing the rear fixing bracket with inward opening

The fixing position of the rear bracket is determined according to the graph (Fig. 4).

Important: installations where the values of "A" and "B" (Fig. 4) are as similar to each other as possible are preferred (l.o.= optimal line). Identify dimension C found and trace a horizontal line that determines the value of dimension B (*) as shown in the example of fig. 4b; the meeting point with line "l.o." (optimal line) determines the value of the angle of maximum opening; from this point, trace a vertical line as shown in the example of fig. 4b to determine the

value of dimension A.

If the angle found does not correspond to the requirements, adapt dimension A and if necessary dimension B, so they are similar.

(*) Do not use values of dimension B below the line "l.s."

If necessary, cut the rear bracket (Fig. 7) to obtain the value "B", then weld the fixing bracket to the wall.

Secure the bracket to the wall using welding, screws or bolts (not included).

4.3 - Installing the front fixing bracket with inward opening

The front bracket must be fixed to the door according to dimension "E" of Table 1 (Fig.5).

Note: If you mount the closing limit switch, reduce the value "E" of

40 mm.

The front bracket must be fixed as the same height as the rear bracket (Fig.8).

4.4 - Installing the rear fixing bracket with outward opening

The EXRB accessory is required for outward opening. Measure distance "C1". If distance "C1" is 130 mm or less, refer to Fig. 5.1A; if it is more than 130 mm, refer to Fig 5.1B.

To establish distance "B1" draw a horizontal line from the value of distance "C1" (Fig.4.1); the point where the areas of the graph meet

provides the possible values of point "A1".

After fastening the rear fixing bracket to the wall, screw on the optional brackets EXRB as shown in Fig. 5.1A or Fig. 5.1B.

4.5 - Installing the front fixing bracket with outward opening

The front bracket must be fixed to the leaf in accordance with distances "E1" (Tab.2, Fig.5.1) and must be fixed at the same height as

the rear bracket (Fig.8).

4.6 - Installing the gear motor

Open the release door and remove the 2 screws that secure the rear cover (Fig. 9A).
Remove the top cover first sliding it slightly backward (Fig. 9A)
Place the gear motor against the rear bracket and insert the fixing screw (Fig.9B).

Insert the pin of the sliding bracket into the bush of the front bracket and secure it with the screw and washer provided (Fig.9C).
Tighten without applying too much force, using the nut and washer of the screw of the rear bracket fitted earlier (Fig.9D).

4.7 - Electrical connections

Loosen the cable gland and insert the power cord (Fig.13).
connect the wires of the power cable to the terminal block according to the wiring diagram (Fig.14).
Screw the cable gland.

Replace the top cover, first sliding it slightly forward.
Open the door and tighten the 2 screws that secure the rear cover.

4.8 - Setting of the mechanical limit switch while opening

Release the gear motor (Fig.11).
Loosen the screw on the mechanical limit switch until it is able to slide.
Open the door manually to the point of desired opening.
Bring the mechanical limit switch up to pin of the slide bracket and secure it with the screw (Fig.12).

If you need to also adjust the mechanical limit switch in closing (optional FCRA), repeat the same procedure, this time manually bringing the door to the point of closure you want.
N.B. The working travel stroke is reduced by 40 mm for every limit switch installed.

4.9 - Replacement of the leds - 24 Vdc

Turn off the power supply.
With the help of a screwdriver remove the lower screw (Fig.15a).
Remove the cover and the LED strip (Fig.15a).
Disconnect the connector (Fig.15b).

Connect the new LEDs and insert them into the mask.
Insert the mask first inserting the side of the seal and then securing it with the screw.

5- TESTING AND COMMISSIONING THE AUTOMATION

The testing of the system must be performed by qualified technicians who must perform the tests required by relevant legislation related to risks, ensuring compliance with the provisions of the regulations, in

particular the EN 12453 standard, which specifies the testing methods for the automation of doors and gates.

5.1 Testing

All system components must be tested following the procedures outlined in the respective instruction manuals.

Check that they meet the guidelines in Chapter 1 - Safety warnings
Check that the gate or door can move freely once the automation is unlocked, and that they are in equilibrium and stationary if left in any position.

Check the correct operation of all connected devices (photocells,

sensitive edges, emergency buttons, etc.), testing the opening, closing and stopping of the gate or door via the connected control devices (transmitters, buttons, switches).

Carry out measurements of the impact force, as prescribed by standard EN 12453 adjusting the functions of speed, motor force and deceleration of the unit if the measurements do not give the desired results until you find the right setting.

5.2 Commissioning

Following the successful testing of all (and not just some) devices in the system you can proceed with the commissioning.

You must prepare, and keep for 10 years, the technical file of the system with the wiring diagram, drawing or photo of the system, risks analysis and solutions adopted, manufacturer declaration of conformity of all devices connected, instruction manual of each device and maintenance schedule of the system.

Fix on the gate or door a plaque indicating the automation data, the name of the person responsible for the commissioning, the serial number and year of construction, the CE mark.

Attach a plaque indicating the steps required to manually unlock the system.

Implement and deliver to the end user the declaration of conformity, the instructions and warnings for use for the end user and the maintenance schedule of the system.

Make sure the user understands proper automatic, manual and emergency operation of the automation.

Inform the end user in writing of the dangers and risks still present.

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6 - IMAGES

Fig. 1 IT - Dimensioni d'ingombro
EN - Space dimensions
DE - Abmessungen
ES - Dimensiones

FR - Dimensions d'encombrement
PT - Dimensões globais
PL - Wymiary

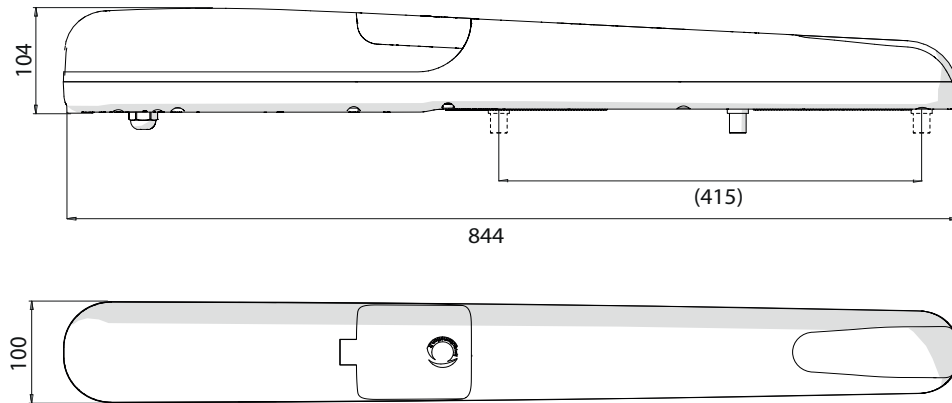
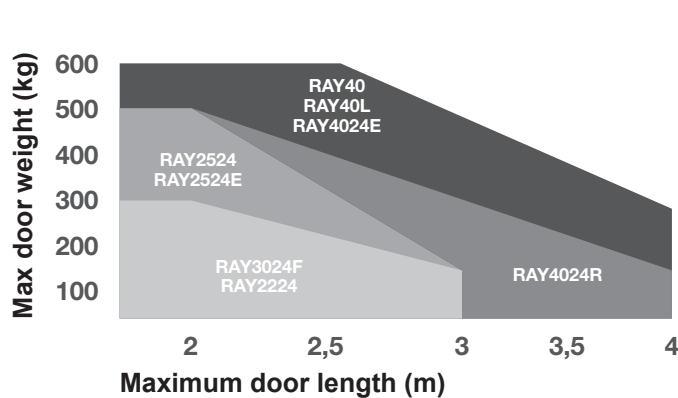


Fig. 2 IT - Limiti di impiego
EN - Use limitations
DE - Einsatzgrenzen
ES - Límites de uso

FR - Limites d'utilisation
PT - Limites de uso
PL - Ograniczenia użytkowania



kg

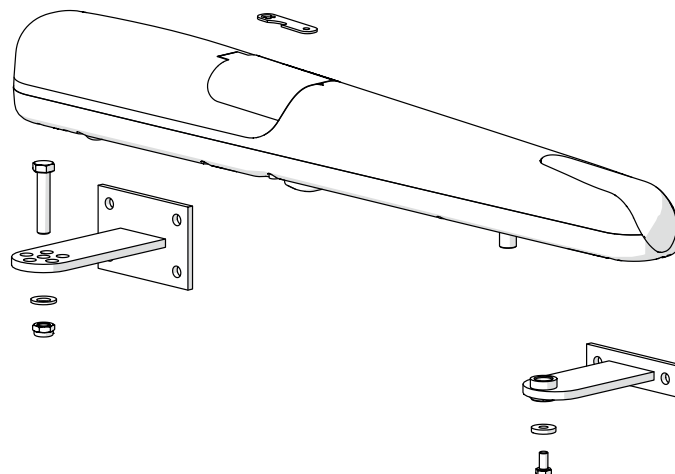
IT - Peso massimo dell' anta del cancello
EN - Maximum weight of the gate door
DE - Maximales Gewicht des Torflügels
ES - Peso máximo de la puerta de la cancela
FR - Poids maximum du battant du portail
PT - Peso máximo do painel do portão
PL - Waga maksymalna skrzydła bramy

m

IT - Lunghezza massima dell' anta del cancello
EN - Maximum length of the gate door
DE - Maximale Länge des Torflügels
ES - Longitud máxima de la puerta de la cancela
FR - Longueur maximum du battant du portail
PT - Comprimento máximo do painel do portão
PL - Długość maksymalna skrzydła bramy

Fig. 3 IT - Componenti
EN - Components
DE - Bauteile
ES - Componentes

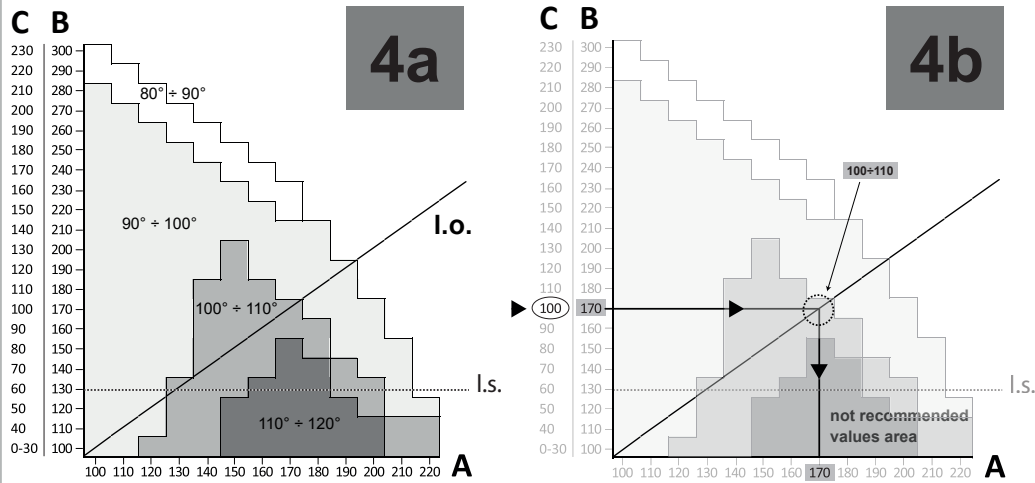
FR - Composants
PT - Componentes
PL - Komponenty



6 - IMAGES

Fig. 4 IT - Grafico angolo di apertura verso l'interno
EN - Inward opening angle graph
DE - Grafische Darstellung: Öffnungswinkel nach innen
ES - Gráfico ángulo de apertura hacia el interior

FR - Schéma angle d'ouverture vers l'intérieur
PT - Gráfico do ângulo de abertura para dentro
PL - Wykres dla kąta rozwarcia w przypadku otwierania do wewnątrz

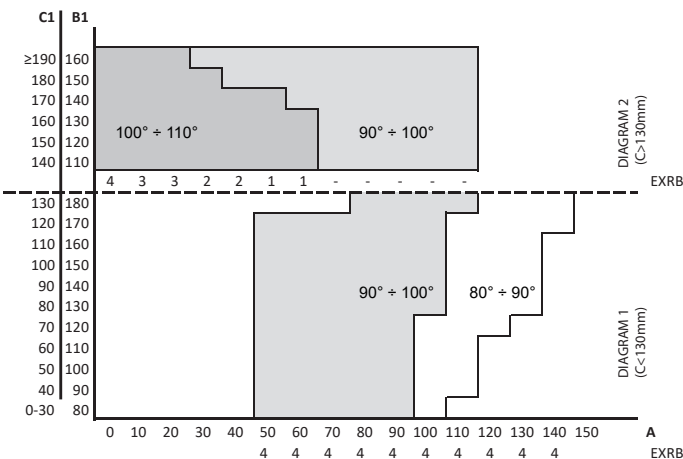


I.o.
IT - linea ottimale consigliata
EN - optimal line recommended
DE - optimale Linie empfohlen
ES - mejor línea posible recomendado
FR - ligne optimale suggérée
PT - linha ideal recomenda
PL - linia optymalna zaleca

Nota: valori senza finecorsa meccanici di apertura e chiusura.
Note: values without mechanical limit switches for opening and closing.
Hinweis: Werte ohne mechanische Endscharter beim Öffnen und Schließen.
Nota: valores sin final de carrera mecánicos de apertura y cierre.
Remarque: valeurs sans butée mécaniques d'ouverture et fermeture.
Nota: valores sem fim de curso mecânico de abertura e fechamento.
Uwagi: wartości bez mechanicznych ograniczników otwierania i zamykania.

Fig. 4.1 IT - Grafico angolo di apertura verso l'esterno
EN - Outward opening angle graph
DE - Grafische Darstellung: Öffnungswinkel nach außen
ES - Gráfico ángulo de apertura hacia el exterior

FR - Schéma angle d'ouverture vers l'extérieur
PT - Gráfico do ângulo de abertura para fora
PL - Wykres dla kąta rozwarcia w przypadku otwierania na zewnątrz



NOTA: valori senza finecorsa meccanici di apertura e chiusura.
I valori possono variare in base alle dimensioni reali della colonna.

NOTE: values without mechanical limit switches for opening and closing.
Values may vary depending on the real dimensions of the column.

HINWEIS: Werte ohne mechanische Endscharter beim Öffnen und Schließen.
Die Werte können sich je nach den realen Abmessungen der Standsäule ändern.

NOTA: valores sin final de carrera mecánicos de apertura y cierre.
Los valores pueden variar en función de las dimensiones reales de la columna.

REMARQUE: valeurs sans butée mécaniques d'ouverture et fermeture.
Les valeurs peuvent varier en fonction de la taille réelle de la colonne.

NOTA: valores sem fim de curso mecânico de abertura e fechamento.
Os valores podem variar consoante as dimensões reais da coluna.

UWAGI: wartości bez mechanicznych ograniczników otwierania i zamykania.
Wartości mogą zmieniać się w zależności od rzeczywistych wymiarów kolumny.

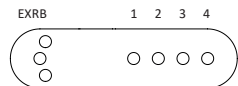


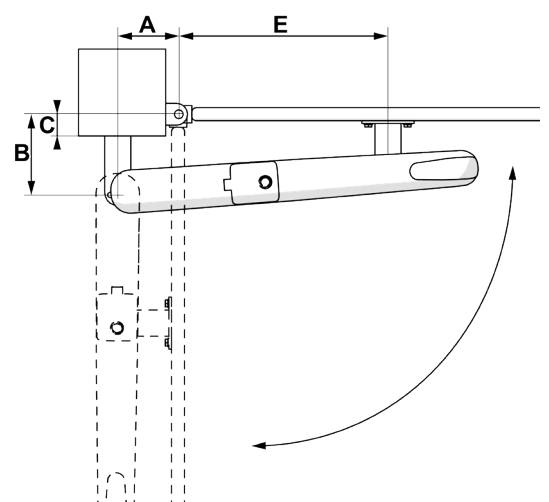
Fig. 5 IT - Rappresentazione quote "A" e "B"
EN - "A" and "B" quotes representation
DE - Darstellung der Werte "A" und "B"
ES - Representación cuotas "A" y "B"

FR - Représentation hauteurs « A » et « B »
PT - Quotas de representação "A" e "B"
PL - Przedstawienie wartości "A" i "B"

IT **A**= distanza tra l'asse della cerniera e l'asse del foro del fissaggio posteriore.
E= distanza tra l'asse della cerniera e l'asse del foro del fissaggio anteriore.
EN **A**= distance between the hinge axis and the axis of the hole for the rear mounting.
E= distance between the hinge axis and the axis of the hole for the front mounting.
DE **A**= Entfernung zwischen der Achse des Scharniers und der Achse der hinteren Befestigungsbohrung.
E= Entfernung zwischen der Achse des Scharniers und der Achse der vorderen Befestigungsbohrung.
ES **A**= distancia entre el eje de la bisagra y el eje del agujero de la fijación posterior.
E= distancia entre el eje de la bisagra y el eje del agujero de la fijación anterior.
FR **A**= distance entre l'axe de la charnière et l'axe du trou de fixation arrière.
E= distance entre l'axe de la charnière et l'axe du trou de fixation avant.
PT **A**= distância entre o pino da dobradiça e o eixo do furo na parte posterior da montagem.
E= distância entre o pino da dobradiça e o eixo do furo na parte anterior da montagem.
PL **A**= odległość między osią zawiasu a osią otworu mocowania tylnego.
E= odległość między osią zawiasu a osią otworu mocowania przedniego.

Tab.1

A	E
100	650
110	640
120	630
130	620
140	610
150	600
160	590
170	580
180	570
190	560
200	550
210	540
220	530
230	520



6 - IMAGES

Fig. 5.1 IT - Rappresentazione quote "A" e "B"
EN - "A" and "B" quotes representation
DE - Darstellung der Werte "A" und "B"
ES - Representación cuotas "A" y "B"

FR - Représentation hauteurs « A » et « B »
PT - Quotas de representação "A" e "B"
PL - Przedstawienie wartości "A" i "B"

IT A= distanza tra l'asse della cerniera e l'asse del foro del fissaggio posteriore.
 E= distanza tra l'asse della cerniera e l'asse del foro del fissaggio anteriore.

EN A= distance between the hinge axis and the axis of the hole for the rear mounting.
 E= distance between the hinge axis and the axis of the hole for the front mounting.

DE A= Entfernung zwischen der Achse des Scharniers und der Achse der hinteren Befestigungsbohrung.
 E= Entfernung zwischen der Achse des Scharniers und der Achse der vorderen Befestigungsbohrung.

ES A= distancia entre el eje de la bisagra y el eje del agujero de la fijación posterior.
 E= distancia entre el eje de la bisagra y el eje del agujero de la fijación anterior.

FR A = distance entre l'axe de la charnière et l'axe du trou de fixation arrière.
 E = distance entre l'axe de la charnière et l'axe du trou de fixation avant.

PT A= distância entre o pino da dobradiça e o eixo do furo na parte posterior da montagem.
 E= distância entre o pino da dobradiça e o eixo do furo na parte anterior da montagem.

PL A= odległość między osią zawiasu a osią otworu mocowania tylnego.
 E= odległość między osią zawiasu a osią otworu mocowania przedniego.

	C1	E1
Fig. 5.1B	≥ 190	560
	180	570
	170	580
	160	590
	150	600
Fig. 5.1A	140	610
	130	480
	120	490
	110	500
	100	510
	90	520
	80	530
	70	540
	60	550
	50	560
	40	570
	0-30	580

Tab.2

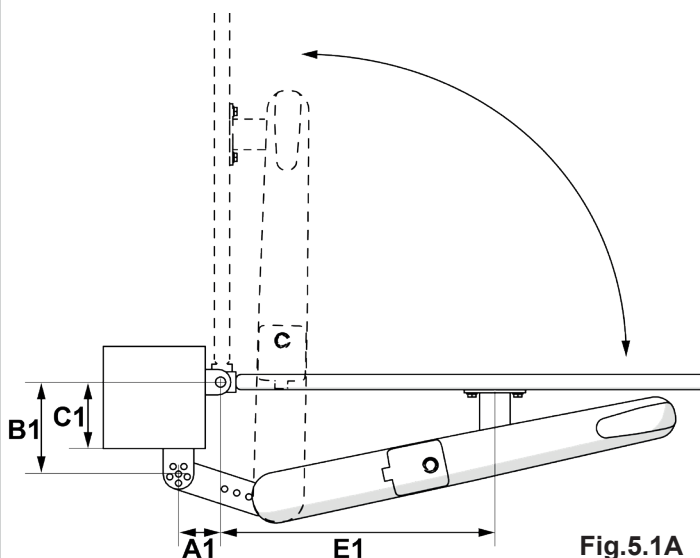


Fig. 5.1A

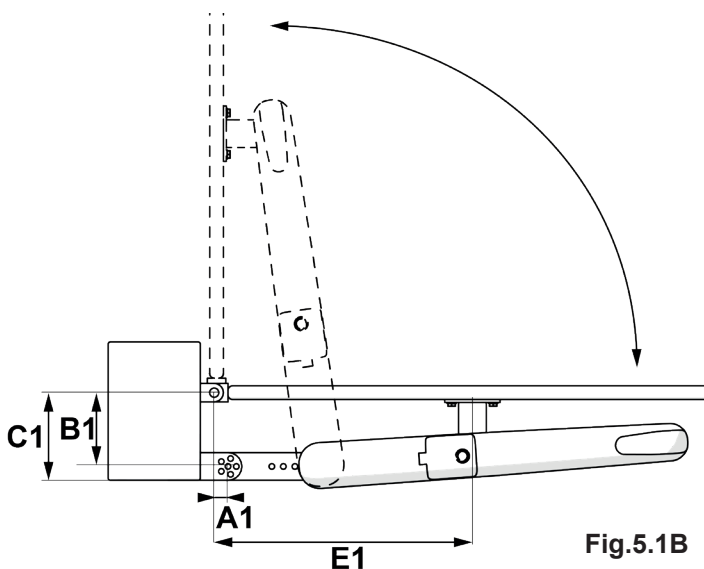
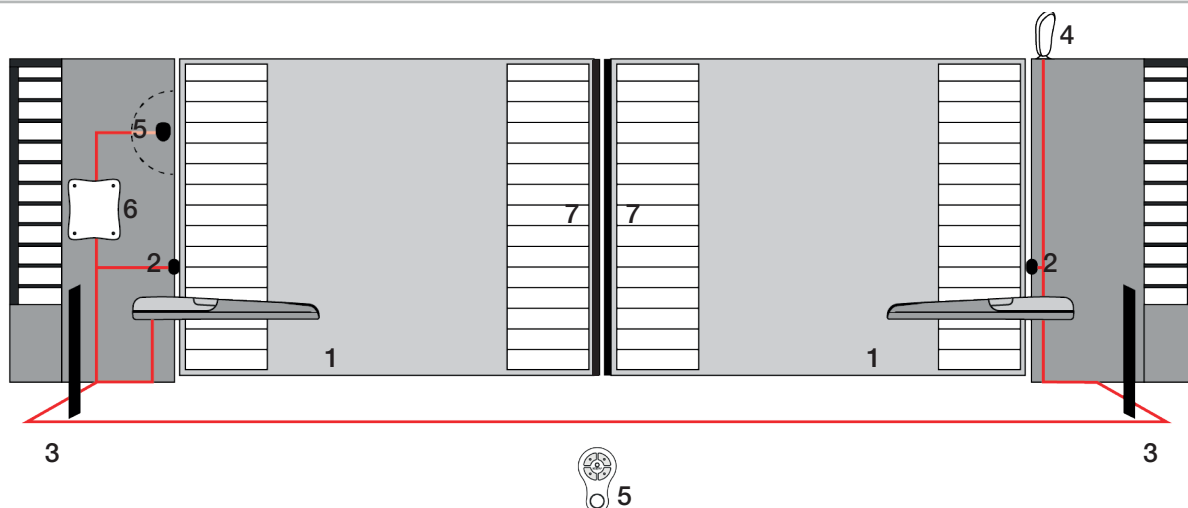


Fig. 5.1B

Fig. 6 IT - Installazione tipica
EN - Typical Installation
DE - Typische Installation
ES - Instalación típica

FR - Installation type
PT - Instalação típica
PL - Typowy sposób instalacji



6 - IMAGES

Fig. 7 IT - Taglio staffa posteriore
EN - Cutting the rear bracket
DE - Schneiden des hinteren Bügels
ES - Corte estribo posterior

FR - Coupe du chevron arrière
PT - Tamanho suporte posterior
PL - Przecięcie obejm tylnych

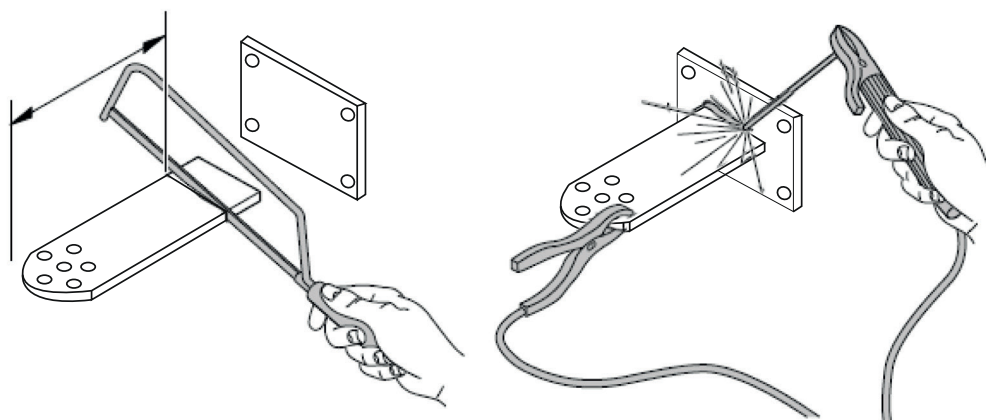


Fig. 8 IT - Fissaggio staffa anteriore
EN - Attaching the front bracket
DE - Befestigung des vorderen Bügels
ES - Fijación del estribo anterior

FR - Fixation du chevron avant
PT - Fixação suporte anterior
PL - Mocowanie obejm przedniej

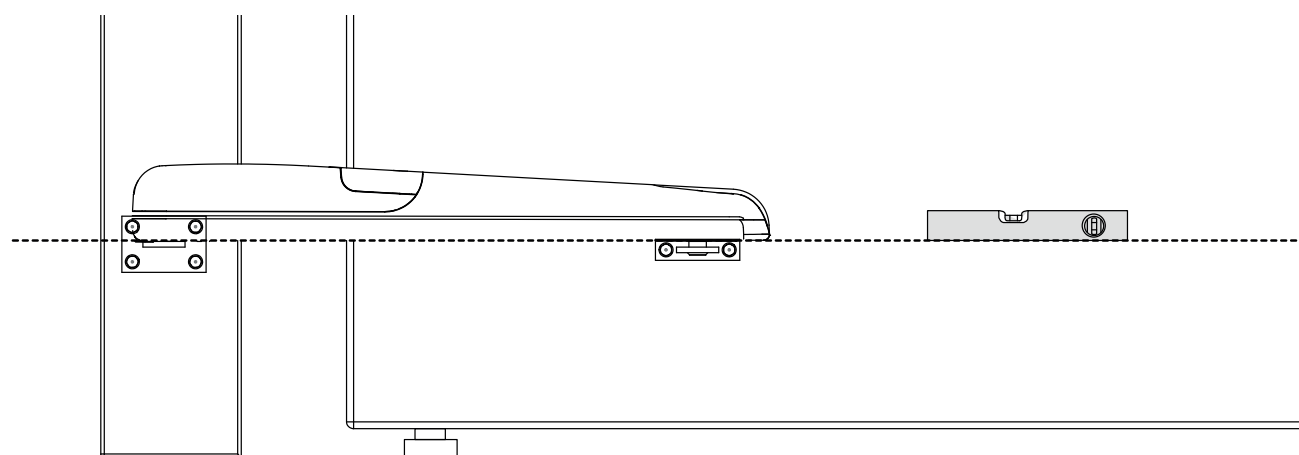
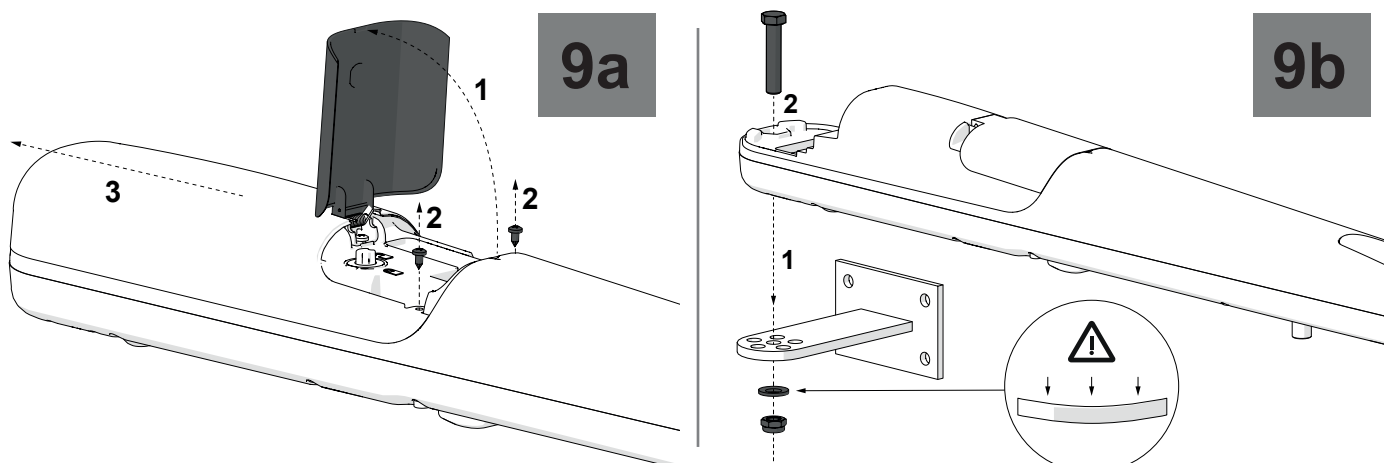


Fig. 9 IT - Fissaggio motoriduttore e staffa posteriore
EN - Securing the gear motor and rear bracket
DE - Befestigung des Getriebemotors und des hinteren Bügels
ES - Fijación motorreductor y estribo posterior

FR - Fixation du motoréducteur et du chevron arrière
PT - Fixação motorreductor e suporte posterior
PL - Mocowanie motoreduktora i obejm tylnych



6 - IMAGES

Fig. 10 IT - Fissaggio motoriduttore e staffa anteriore
 EN - Securing the gear motor and rear bracket
 DE - Befestigung des Getriebemotors und des vorderen Bügels
 ES - Fijación motorreductor y estribo posterior

FR - Fixation du motoréducteur et du chevron avant
 PT - Fixação motorreductor e suporte posterior
 PL - Mocowanie motoreduktora i obejmy przedniej

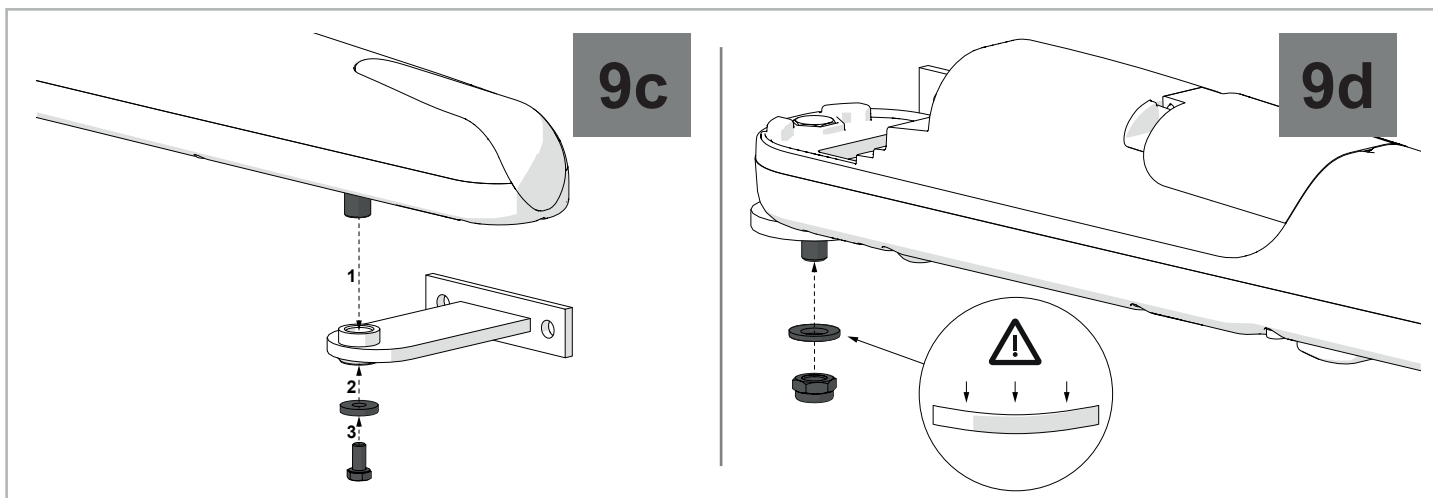


Fig. 11 IT - Sblocco del motoriduttore
 EN - Gearmotor release
 DE - Entriegeln des Getriebemotors
 ES - Desbloqueo del motorreductor

FR - Déblocage du motoréducteur
 PT - Desbloqueio do motorreductor
 PL - Odblokowanie motoreduktora

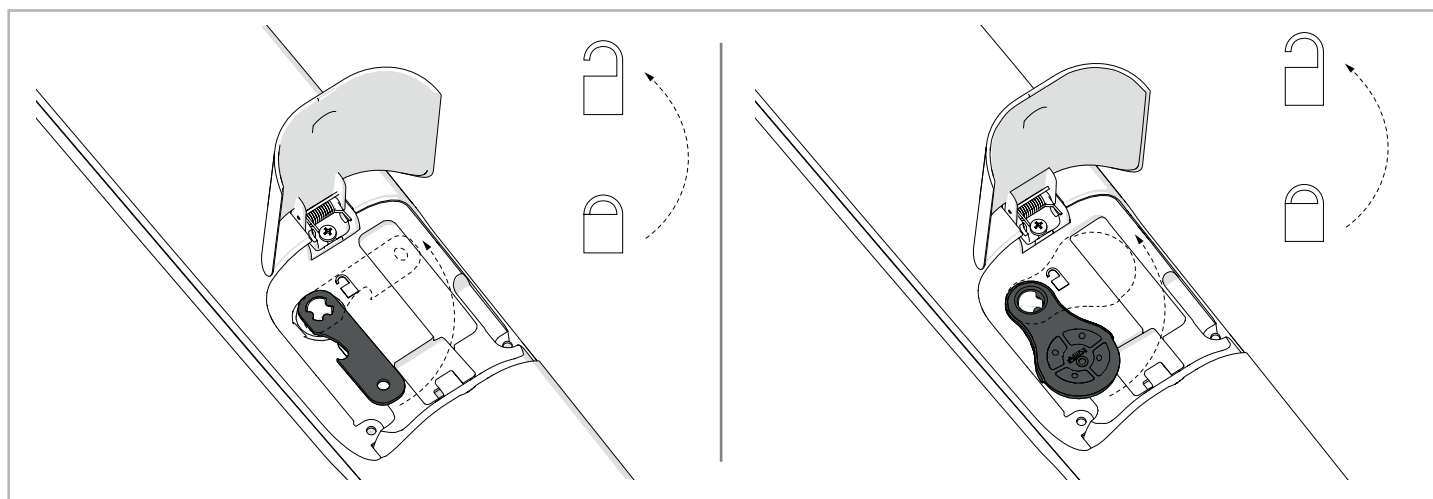
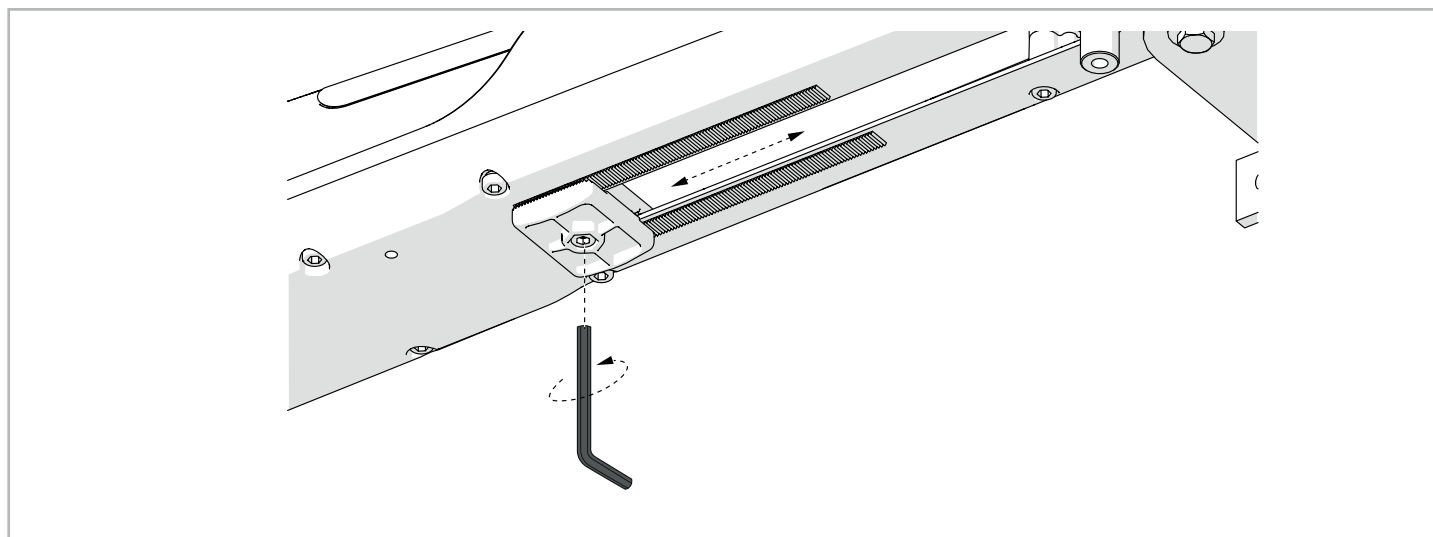


Fig. 12 IT - Regolazione fine corsa meccanico
 EN - Setting of the mechanical limit switch
 DE - Einstellen des mechanischen Endanschlags
 ES - Regulación final de carrera mecánico

FR - Réglage de la butée mécanique
 PT - Regulagem fim de curso mecânico
 PL - Regulacja ogranicznika mechanicznego



6 - IMAGES

Fig. 13-14 IT - Connessioni elettriche
EN - Power connections
DE - Elektrische Anschlüsse
ES - Conexiones eléctricas

FR - Branchements électriques
PT - Conexões eléctricas
PL - Połączenia elektryczne

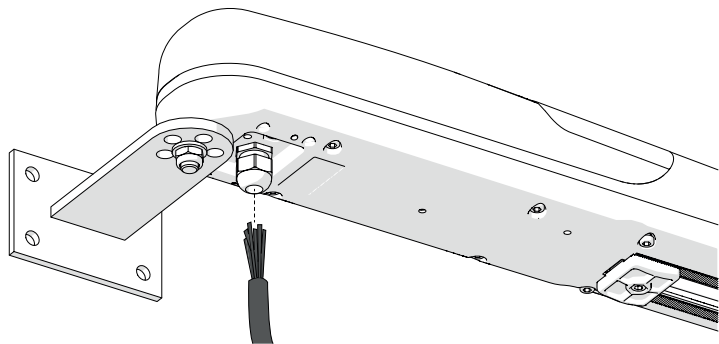


Fig. 13

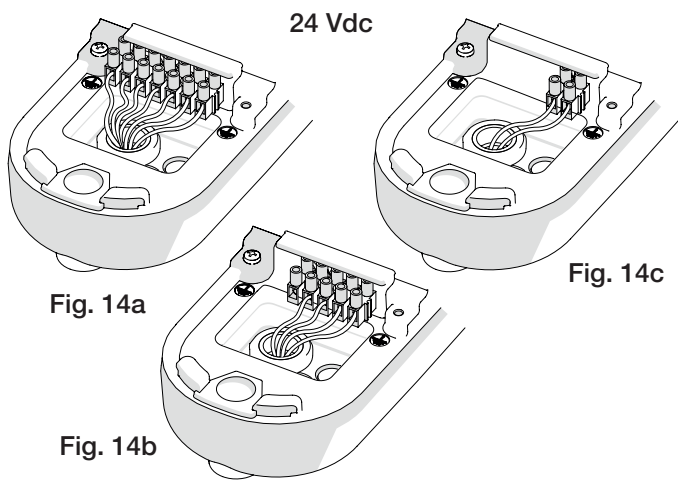


Fig. 14a

Fig. 14b

Fig. 14c

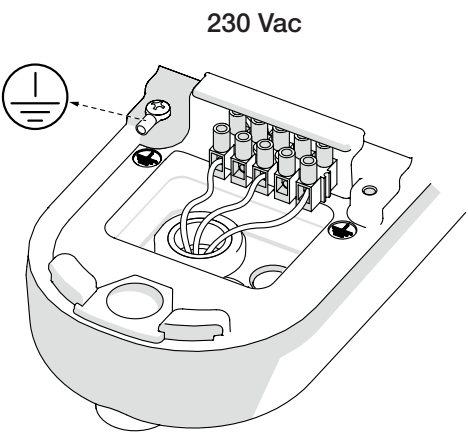


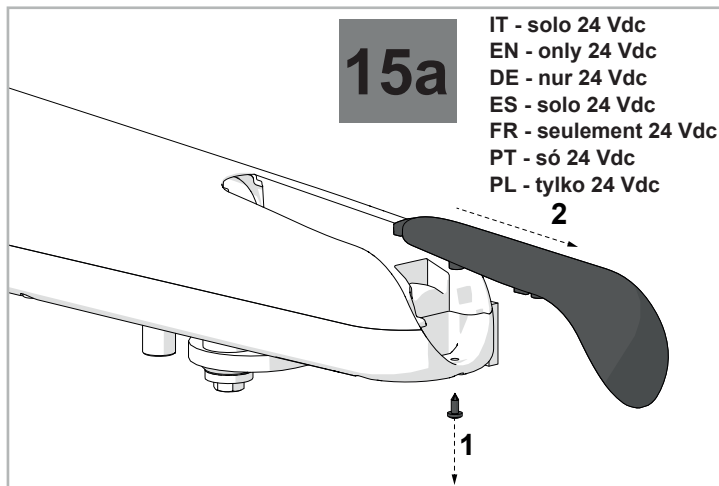
Fig. 14d

RAY4024E Fig. 14a						RAY2524 Fig. 14b				RAY2224 Fig. 14c			
Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø
V+	ENC	NEG	COM	LED	M+	COM	LED	M+	M-	M+	M-	M+	M-
ENCODER			LED		MOTOR		LED		MOTOR		MOTOR		

RAY40 - RAY40L Fig. 14d					
Ø	Ø	Ø	Ø	Ø	Ø
L2		L1		COM	
MOTOR					

Fig. 15 IT - Sostituzione led
EN - Replacement of the leds
DE - Auswechseln der Led
ES - Sustitución de las luces led

FR - Remplacement des DEL
PT - Substituição led
PL - Wymiana diod led

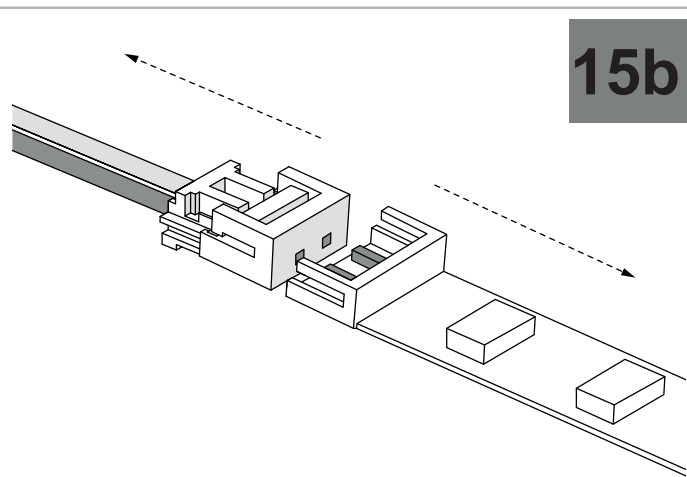


15a

IT - solo 24 Vdc
EN - only 24 Vdc
DE - nur 24 Vdc
ES - solo 24 Vdc
FR - seulement 24 Vdc
PT - só 24 Vdc
PL - tylko 24 Vdc

2

1



15b

DICHIARAZIONE DI INCORPORAZIONE DI QUASI-MACCHINA *DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY*

Il sottoscritto Nicola Michelin, Amministratore Delegato dell'azienda
The undersigned Nicola Michelin, General Manager of the company

Key Automation S.r.l., Via Meucci, 23 - 30027 San Donà di Piave (VE) – ITALIA

dichiara che il prodotto tipo:
declares that the product type:

RAY

Motoriduttore elettromeccanico a pistone per cancelli battenti
Electromechanical piston for swing gates

Models:
Models:

RAY2524, RAY2224, RAY4024E, RAY4224E, RAY3024F, RAY4024ER, RAY40, RAY40L

E' conforme a quanto previsto dalle seguenti direttive comunitarie:
Is in conformity with the following community (EC) regulations:

Direttiva macchine / *Machinery Directive 2006/42/EC*
Direttiva compatibilità elettromagnetica / *EMC Directive 2014/30/EU*
Direttiva bassa tensione / *Low voltage Directive 2014/35/EU*
Direttiva radiofrequenza / *RED Directive 2014/53/EU*
Direttiva RoHS / *RoHS Directive 2011/65/UE*

Secondo quanto previsto dalle seguenti norme armonizzate:
In accordance with the following harmonized standards regulations:

ETSI EN 301489-3:2013, ETSI EN 301489-1:2011
EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013
EN 61000-3-2:2014, EN 61000-3-3:2013
EN 61000-6-2:2005, EN 61000-6-3:2007
EN 60335-1:2012 + A1 + A11; EN 60335-2-103:2015
EN 55014-1:2006 + A1 + A2; EN 55014-2:2015
EN 62233:2008

Dichiara che la documentazione tecnica pertinente al prodotto è stata redatta conformemente a quanto previsto dalla direttiva 2006/42/CE Allegato VII parte B e verrà fornita a fronte di una richiesta adeguatamente motivata dalle autorità nazionali.

Declares that the technical documentation is compiled in accordance with the directive 2006/42/EC Annex VII part B and will be transmitted in response to a reasoned request by the national authorities.

Dichiara altresì che non è consentita la messa in servizio del prodotto finché la macchina, in cui il prodotto è incorporato, non sia stata dichiarata conforme alla direttiva 2006/42/CE.

He also declares that is not allowed to use the above mentioned product until the machine, in which this product is incorporated, has been identified and declared in conformity with the regulation 2006/42/EC.

San Donà di Piave (VE), 28/02/2024

Amministratore Delegato
General Manager
Nicola Michelin



Key Automation S.r.l.
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REA VE 326953
www.keyautomation.com



Organizzazione con sistema di gestione certificato
ISO 9001

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Instruction version

580ISRAY REV13