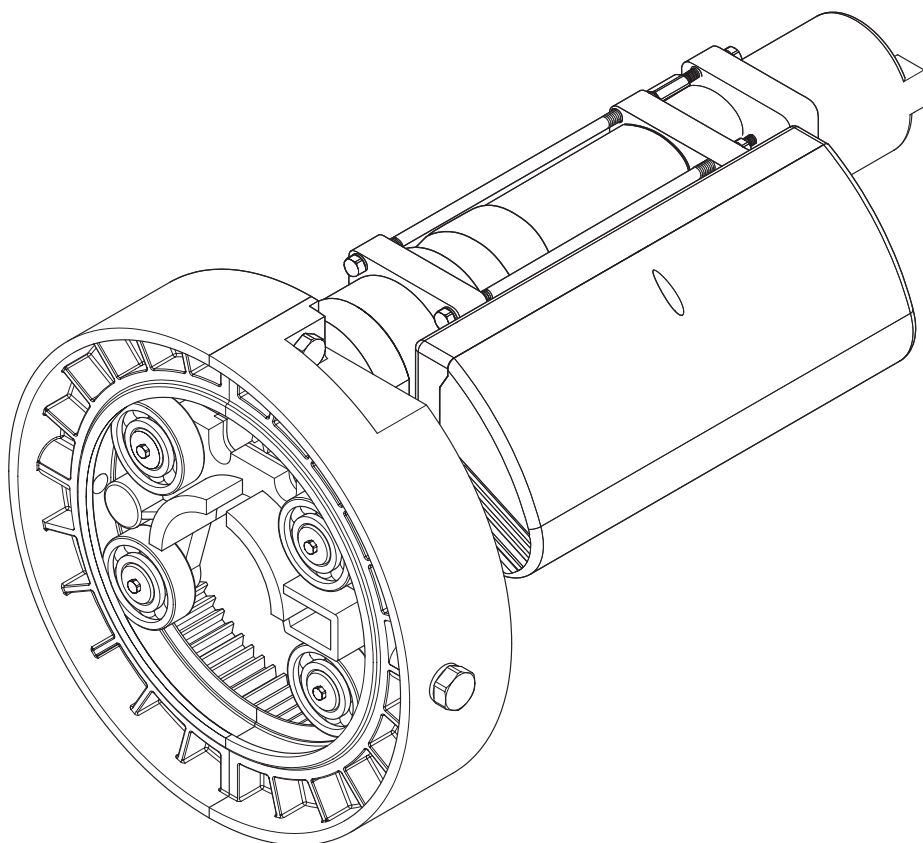


GB OPERATORS FOR BALANCED ROLL-UP DOORS



X 130

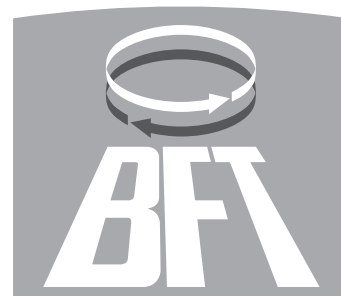


INSTALLATION AND USER'S MANUAL



**AZIENDA CON SISTEMA
DI GESTIONE INTEGRATO
CERTIFICATO DA DNV
= UNI EN ISO 9001:2000 =
UNI EN ISO 14001:1996**

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KONFORMITÄTSERKLÄRUNG / DECLARACION DE CONFORMIDAD / DECLARAÇÃO DE CONFORMIDADE**
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VICENZA - ITALY

- Dichiara sotto la propria responsabilità che il prodotto: / Declares under its own responsibility that the following product: / Déclare sous sa propre responsabilité que le produit: / Erklärt auf eigene Verantwortung, daß das Produkt: / Declara, bajo su propia responsabilidad, que el producto: / Declara, sob a sua responsabilidade, que o produto:

AUTOMAZIONI PER SERRANDE BILANCIATE mod / OPERATORS FOR BALANCED ROLL-UP DOORS mod /
MOTORISATIONS POUR RIDEAUX ÉQUILIBRÉS mod / AUTOMATISCHE TORANTRIEBE FÜR AUSGEWUCHTETE
ROLLTORE mod / AUTOMATISMOS PARA CIERRES METÁLICOS EQUILIBRADOS mod / AUTOMAÇÕES PARA GRADES DE
ENROLAR EQUILIBRADAS mod /

X130, X130P, X130 EF, X130P EF

- È costruito per essere incorporato in un macchinario che verrà identificato come macchina ai sensi della DIRETTIVA MACCHINE. / Has been produced to be incorporated into a machinery, which will be identified as a machine according to the MACHINERY DIRECTIVE. / A été construit pour l'incorporation successive dans un équipement qui sera identifié comme machine conformément à la DIRECTIVE MACHINES. / Dafür konstruiert wurde, in ein Gerät eingebaut zu werden, das als Maschine im Sinne der MASCHINEN-DIREKTIVE identifiziert wird. / Ha sido construido para ser incorporado en una maquinaria, que se identificará como máquina de conformidad con la DIRECTIVA MAQUINAS. / Foi construído para ser incorporado numa maquinaria, que será identificada como máquina em conformidade com a DIRECTIVA MÁQUINAS
- È conforme ai requisiti essenziali di sicurezza delle Direttive: / It also complies with the main safety requirements of the following Directives: / Est conforme aux exigences essentielles de sécurité des Directives: / Es entspricht den grundlegenden Sicherheitsbedingungen der Direktiven: / Es conforme a los requisitos esenciales de seguridad de las Directivas: / Está conforme aos requisitos essenciais de segurança das Directivas:

BASSA TENSIONE / LOW VOLTAGE / BASSE TENSION / NIEDERSPANNUNG / BAJA TENSION / BAIXA TENSÃO 73/23/CEE, 93/68/CEE (EN60335-1 ('03), EN60335-2-97) (e modifiche successive / and subsequent amendments / et modifications successives / und ihren nachfolgende Änderungen / e modificações sucessivas / y modificaciones sucesivas).

COMPATIBILITÀ ELETTROMAGNETICA / ELECROMAGNETIC COMPATIBILITY / COMPATIBILITÉ ÉLECTROMAGNÉTIQUE / ELEKTROMAGNETISCHE KOMPATIBILITÄT / COMPATIBILIDAD ELECTROMAGNÉTICA / COMPATIBILIDADE ELECTROMAGNÉTICA 89/336/CEE, 91/263/CEE, 92/31/CEE, 93/68/CEE (EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN55014-1, EN55014-2) (e modifiche successive / and subsequent amendments / et modifications successives / und ihren nachfolgende Änderungen / e modificações sucessivas / y modificaciones sucesivas).

- Si dichiara inoltre che è vietata la messa in servizio del prodotto, prima che la macchina in cui sarà incorporato, sia stata dichiarata conforme alle disposizioni della DIRETTIVA MACCHINE. / We also declare that it is forbidden to start the product before the machinery into which it will be incorporated is declared in compliance with the prescriptions of the MACHINERY DIRECTIVE. / Nous déclarons en outre que la mise en service du produit est interdite, avant que la machine où il sera incorporé n'ait été déclarée conforme aux dispositions de la DIRECTIVE MACHINES. / Es wird außerdem erklärt, daß die Inbetriebnahme des Produkts verboten ist, solange die Maschine, in die es eingebaut wird, nicht als mit den Vorschriften der MASCHINEN-DIREKTIVE konform erklärt wurde. / Se declara, además, que está prohibido instalar el producto antes de que la máquina en la que se incorporará haya sido declarada conforme a las disposiciones de la DIRECTIVA MAQUINAS / Declaramos, além disso, que é proibido instalar o produto, antes que a máquina em que será incorporada, tenha sido declarada conforme às disposições da DIRECTIVA MÁQUINAS

SCHIO, 20/05/2004

Il Rappresentante Legale / The legal Representative
Le Représentant Légal / Der gesetzliche Vertreter
El Representante Legal / O Representante legal


(GIANCARLO BONOLLO)

Nel ringraziarVi per la preferenza accordata a questo prodotto, la ditta è certa che da esso otterrete le prestazioni necessarie al Vostro uso. **Leggete attentamente l'opuscolo "AVVERTENZE" ed il "LIBRETTO ISTRUZIONI" che accompagnano questo prodotto in quanto forniscono importanti indicazioni riguardanti la sicurezza, l'installazione, l'uso e la manutenzione.** Questo prodotto risponde alle norme riconosciute della tecnica e della disposizioni relative alla sicurezza. Confermiamo che è conforme alle seguenti direttive europee: 89/336/CEE, 73/23/CEE (e loro modifiche successive).

1) GENERALITÀ

Attuatore elettromeccanico compatto e robusto per serrande bilanciate, dispone di finecorsa elettrici regolabili in apertura e chiusura.

Disponibile in versione reversibile (X130) e irreversibile (X130EF), dotato di elettrofreno.

Per le versioni irreversibili la manovra di emergenza si effettua mediante un pomello a filo.

2) SBLOCCO DI EMERGENZA

Lo sblocco di emergenza rende la serranda manovrabile manualmente.

X130/X130P:

Nel caso di modelli senza elettrofreno è sufficiente, dopo aver aperto l'eventuale serratura, sollevare manualmente la serranda costringendo ad un movimento reversibile il motoriduttore.

X130EF/X130PEF:

Nel caso di modelli provvisti di elettrofreno, svitare tra loro i due componenti del pomello di sblocco (Fig.1), in modo da liberare il freno del motoriduttore, e consentire così l'apertura manuale della serranda. Per ripristinare il funzionamento motorizzato riavvitare il pomello.

3) USO DELL'AUTOMAZIONE

Poiché l'automazione può essere comandata a distanza e quindi non a vista, è indispensabile controllare frequentemente la perfetta efficienza di tutti i dispositivi di sicurezza.

ATTENZIONE! Per qualsiasi anomalia di funzionamento dei dispositivi di sicurezza, intervenire rapidamente avvalendosi di personale qualificato.

Si raccomanda di tenere i bambini a debita distanza dal campo d'azione dell'automazione.

Non lasciare radiocomandi o altri dispositivi di comando alla portata dei bambini onde evitare azionamenti involontari dell'automazione.

Esaminare frequentemente l'installazione verificando se sono presenti segni di sbilanciamento, di usura o danno a cavi e molle. Non usare l'automazione nel caso risultassero necessarie una riparazione o una regolazione.

4) DEMOLIZIONE

L'eliminazione dei materiali va fatta rispettando le norme vigenti. Nel caso di demolizione dell'automazione non esistono particolari pericoli o rischi derivanti dall'automazione stessa. È opportuno, in caso di ricupero dei materiali, che vengano separati per tipologia (parti elettriche - rame - alluminio - plastica - ecc.).

Le descrizioni e le illustrazioni del presente manuale non sono impegnative. Lasciando inalterate le caratteristiche essenziali del prodotto, la Ditta si riserva di apportare in qualunque momento le modifiche che essa ritiene convenienti per migliorare tecnicamente - costruttivamente e commercialmente il prodotto, senza impegnarsi ad aggiornare la presente pubblicazione.

Thank you for buying this product, our company is sure that you will be more than satisfied with the product's performance. **The product is supplied with a "Warnings" leaflet and an "Instruction booklet". These should both be read carefully as they provide important information about safety, installation, operation and maintenance.** This product complies with the recognised technical standards and safety regulations. We declare that this product is in conformity with the following European Directives: 89/336/EEC and 73/23/EEC (and subsequent amendments).

1) GENERAL OUTLINE

Compact sturdy electromechanical operator for balanced roll-up doors, provided with electrical limit switches which can be adjusted on opening and on closing.

Available in two versions, reversible (X130) and irreversible (X130EF), the latter provided with electric brake.

For irreversible versions, the emergency manoeuvre is carried out by means of a knob attached to a wire.

2) EMERGENCY RELEASE

The emergency release device makes it possible to manoeuvre the roll-up door manually.

X130/X130P:

In the case of models without electric brake, simply open the lock, if fitted, and then manually lift the roll-up door, thereby forcing the gearmotor to a reversible movement.

X130EF/X130PEF:

In the case of models with no electric brake, unscrew the two release knob elements (Fig. 1) in order to release the gearmotor brake and thus allow the roll-up door to be opened manually. To reset motor-driven operation, retighten the knob.

3) USE OF AUTOMATION

As automation can be remotely controlled and therefore not within sight, it is essential to frequently check that all safety devices are perfectly efficient.

WARNING! In case of any malfunction in the safety devices, take immediate action and require the assistance of a specialised technician.

It is recommended to keep children at a safe distance from the automation field of action.

Do not leave radio transmitters or other control devices within children's reach, in order to avoid any unintentional operator activation.

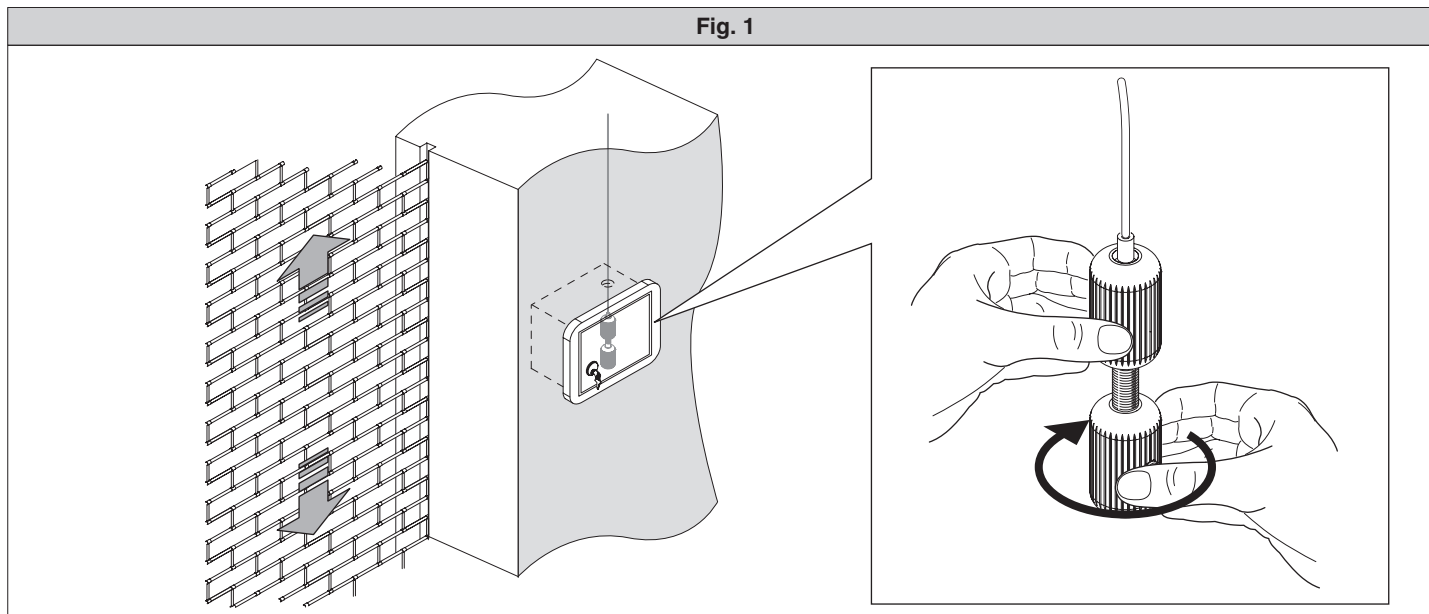
Inspect the installation frequently to check for signs of unbalance, wear or damage to cables or springs. Do not use the operator if any repairs or adjustments are considered necessary.

4) SCRAPPING

Materials must be disposed of in conformity with the current regulations. In case of scrapping, the automation devices do not entail any particular risks or danger. In case of recovered materials, these should be sorted out by type (electrical components, copper, aluminium, plastic etc.).

The descriptions and illustrations contained in the present manual are not binding. The Company reserves the right to make any alterations deemed appropriate for the technical, manufacturing and commercial improvement of the product, while leaving the essential product features unchanged, at any time and without undertaking to update the present publication.

Fig. 1



Thank you for buying this product, our company is sure that you will be more than satisfied with the product's performance. **The product is supplied with a "Warnings" leaflet and an "Instruction booklet". These should both be read carefully as they provide important information about safety, installation, operation and maintenance.** This product complies with the recognised technical standards and safety regulations. We declare that this product is in conformity with the following European Directives: 89/336/EEC and 73/23/EEC, (and subsequent amendments).

1) GENERAL OUTLINE

Compact sturdy electromechanical operator for balanced roll-up doors, provided with electrical limit switches which can be adjusted on opening and on closing.

Available in two versions, reversible (X130) and irreversible (X130EF), the latter provided with electric brake.

For irreversible versions, the emergency manoeuvre is carried out by means of a knob attached to a wire.

The operator supplied is suitable for 60mm shafts and 220mm drive pulleys.

If necessary, 42mm and 48mm reduction half bearings, as well as 200mm drive pulleys are available.

2) GENERAL SAFETY

WARNING! An incorrect installation or improper use of the product can cause damage to persons, animals or things.

- The "Warnings" leaflet and "Instruction booklet" supplied with this product should be read carefully as they provide important information about safety, installation, use and maintenance.
- Scrap packing materials (plastic, cardboard, polystyrene etc) according to the provisions set out by current standards. Keep nylon or polystyrene bags out of children's reach.
- Keep the instructions together with the technical brochure for future reference.
- This product was exclusively designed and manufactured for the use specified in the present documentation. Any other use not specified in this documentation could damage the product and be dangerous.
- The Company declines all responsibility for any consequences resulting from improper use of the product, or use which is different from that expected and specified in the present documentation.
- Do not install the product in explosive atmosphere.
- The construction components of this product must comply with the following European Directives: 89/336/CEE, 73/23/EEC, 98/37/EEC and subsequent amendments. As for all non-EEC countries, the above-mentioned standards as well as the current national standards should be respected in order to achieve a good safety level.
- The Company declines all responsibility for any consequences resulting from failure to observe Good Technical Practice when constructing closing structures (door, gates etc.), as well as from any deformation which might occur during use.
- The installation must comply with the provisions set out by the following European Directives: 89/336/CEE, 73/23/EEC, 98/37/EEC and subsequent amendments.
- Disconnect the electrical power supply before carrying out any work on the installation. Also disconnect any buffer batteries, if fitted.
- Fit an omnipolar or magnetothermal switch on the mains power supply, having a contact opening distance equal to or greater than 3,5 mm.
- Check that a differential switch with a 0.03A threshold is fitted just before the power supply mains.
- Check that earthing is carried out correctly: connect all metal parts for closure (doors, gates etc.) and all system components provided with an earth terminal.
- Fit all the safety devices (photocells, electric edges etc.) which are needed to protect the area from any danger caused by squashing, conveying and shearing, according to and in compliance with the applicable directives and technical standards.
- Position at least one luminous signal indication device (blinker) where it can be easily seen, and fix a Warning sign to the structure.
- The Company declines all responsibility with respect to the automation safety and correct operation when other manufacturers' components are used.
- Only use original parts for any maintenance or repair operation.
- Do not modify the automation components, unless explicitly authorised by the company.
- Instruct the product user about the control systems provided and the manual opening operation in case of emergency.
- Do not allow persons or children to remain in the automation operation area.
- Keep radio control or other control devices out of children's reach, in order to avoid unintentional automation activation.

- The user must avoid any attempt to carry out work or repair on the automation system, and always request the assistance of qualified personnel.
- Anything which is not expressly provided for in the present instructions, is not allowed.
- Any safety device that should be required must be in compliance with the EN 12978 Standard.
- Check that the impact force value measured at the points established by the EN 12445 standard is lower than that specified in the EN 12453 standard.
- Fit any fixed control device within sight of the door, but away from any moving parts, higher than 1.5 m.

3) TECHNICAL SPECIFICATIONS

Pulley diameter:.....	X130:220mm - X130P:200mm
Power supply:.....	230V~±10% 50Hz (*)
Maximum weight:.....	X130: 2000N (200 kg)X130P: 2200N (220 kg)
	X130EF: 1800N (180 kg)X130PEF: 2000N (200 kg)
Absorbed power:.....	X130...400W
	X130 P...423W
	X130 EF...407W
	X130PEF...425W
Operation time:.....	4' min
End-of-stroke revolutions:.....	9
Output shaft revolutions:.....	12 min ⁻¹
Thermal protection:.....	present
Motor:.....	2800 min ⁻¹ 2 poles
Capacitor for X130:.....	11µF 450V (230V): 40µF 250V (110V)
Capacitor for X130 EF:.....	12,5µF 450V (230V): 50µF 250V (110V)
Insulation class:.....	F
Circuit-breaking activation temperature:.....	160°C (self-resetting)
Reduction gear lubrication:.....	Permanent grease
Max. torque X130-X130 P-X130 EF-X130 PEF:.....	130 Nm
Impact reaction (safety edge):.....	stop and reverse
Limit devices:.....	Electromechanical, incorporated and adjustable
Maximum no. manoeuvres in 24h:.....	10
Working temperature:.....	-10°C ÷ +50°C
Degree of protection:.....	IP20
Operator weight:.....	60N (~6 kg)
Noise level:.....	<70dB(A)
Torque for reversibility (brake not fitted or released).....	4Nm
Dimensions:.....	See fig. 1

(*) Special power supply voltages available on request.

4) ACCESSORIES

- PTP Drive pulley with 200mm diameter
- PTG Drive pulley with 220mm diameter
- CS 42 Pair of reduction half bearings for shafts with 42mm diameter
- CS 48 Pair of reduction half bearings for shafts with 48mm diameter
- EF Electric brake kit to be installed on X130 and X130P operators

5) MAIN OPERATOR COMPONENTS (Fig. 1)

- Electromechanical operator comprising:
- M** Single-phase 2 pole motor protected by a thermal circuit breaker
 - C** Roll-up door opener body
 - F** Limit device adjustment box
 - P** Drive pulley
 - E** Electric brake with release mechanism (only on "EF" mod.)

6) PRELIMINARY CHECKS

Before fitting the motor, remove any redundant ropes or chains, and disable any unnecessary appliance.

Check that the roll-up door characteristics are compatible with the maximum torque specified and the operating time.

Check the weight of the roll-up door, check the diameter of the spring-holder boxes and the diameter of the spring-holder shaft.

Choose the model with or without closing lock, depending on which is more suitable for the type of installation.

If necessary, purchase the reductions for 42 or 48mm shafts (CS42 or CS48), and also a pulley having the correct diameter.

NOTE: All the models supplied without an electric brake can be fitted with one at a later time if required. (EF KIT).

In the case where greater capacity is required with respect to that supplied by a single motor, fit a pair of X130 operators on the same spring-holder shaft. Before carrying out the installation, carefully check that:

- the roll-up door structure is sturdy and rigid;
- the roll-up door slides evenly along its entire stroke, without any friction.
- If the manoeuvre is difficult, grease the sliding tracks.
- Repair or replace the worn or faulty components.

The operator reliability and safety is directly affected by the condition of the roll-up door structure.

Motor drive only facilitates operation and does not solve the problems caused by defective or deficient installation or failed maintenance of the roll-up door.

7) FITTING THE OPERATOR

- 1) Arrange the gearmotor unit halfway along the spring-holder shaft, and lightly fix it to bracket S (Fig. 2) using screws V and nuts D.
In the case of shafts with a 42 or 48mm diameters, fit the pairs of half bearings CS, paying attention to the position of the hole which must coincide with slot A (Fig. 2).
- 2) Drill a 10mm diameter hole through the roll-up door shaft, to correspond with slot A.
- 3) Complete the fixing operation by inserting appropriate screw V into the hole to prevent the gearmotor unit from rotating (Fig. 3).
- 4) Fix bracket S and complete screw tightening (Fig. 2).
- 5) Put the two sections of the drive pulley back together inside the roll-up door opener unit, making sure that the bearings are correctly positioned in the sliding channel and that the pulley toothing and the sliding channel are free from any drilling residue, dirt etc.(Fig.4).
Grease the two parts of the driving pulley before connecting them.
- 6) Make a hole (Fig. 5 ref. F) in the top end of the roll-up door, then secure the roll-up door to the drive pulley by means of screw V.
NOTE: Check that, when the roll-up door is fully lowered, the limit device protection box can be easily accessed (Fig. 1 "F"). If necessary, rotate the gearmotor unit while keeping the drive pulley still (in "EF" models provided with electric brake, use the emergency release device).

8) ELECTRIC INSTALLATION SETUP

Provide electrical installation complying with the CEI standards actually in force. The power supply connections must be kept totally separate from the service connections (photocells, safety edges, control devices etc.).

WARNING! For the connection to the power supply, use a multipolar cable having minimum 4x1.5 sq mm cross section and complying with the previously mentioned regulations (for example, if the cable is not protected it must be at least equal to H07 RN-F, whereas if it is protected it must be at least equal to H05 VV-F with a 4x1.5 sq mm section).

Connect the control and safety devices in compliance with the standards actually in force. Fig. 8 indicates the number of connections and the cross section for power supply cables approximately 100 metre long; in case of longer cables, calculate the cross section for the true operator load. When the auxiliary connections are over 50-metre long or pass through critical disturbance areas, it is recommended to decouple the control and safety devices by means of suitable relays.

These are the main components for an operator (fig. 8):

- I) Type-approved omnipolar circuit breaker having adequate capacity, with at least 3,5 mm contact opening, provided with protection against overloads and short circuits, suitable for cutting out the operator from the power supply mains. If not already present, a type-approved omnipolar switch with a 0.03 A threshold should be installed in the circuit before the operator.
- QR) Control panel and incorporated receiver
- S) Key selector
- AL) Blinker with tuned antenna
- M) Operator
- CS) Safety edge
- CC) Edge control device
- Ft, F) Pair of photocells
- T) 1-2-4 channel transmitter.

Fig. 11 illustrates the connection diagrams referred to the various types of installation (1 or 2 motors, with or without electric brake) fitted with a HOLD-TO-RUN control device. Use an omnipolar commutator (10A-250V) with a three-position button and direction arrows.

For other control devices, refer to the respective instruction manuals.

9) END-OF-STROKE ADJUSTMENT

WARNING: Disconnect the mains power supply before opening the limit switch adjustment box cover.

CLOSING LIMIT SWITCH.

Move the roller shutter to the required closing position, disconnect the main supply power and loosen the screw that fastens the cover. Manually adjust the RC wheel (fig.6) until the triggering of the MC closing microswitch is heard.

OPENING LIMIT SWITCH

Place the F reference ring onto the C microswitch support and close the C limit switch box cover. Re-connect the machine to the mains power sup-

ply. Open the roller shutter electrically and stop it at the required opening height, then re-close the roller shutter. At this stage, disconnect the mains power supply and loosen the screw that fastens the cover. Align the RA stopping wheel with the ring which was used as reference for the adjustment. Upon completion of this operation, lock the RA and RC wheels with the corresponding CR wheels (fig.7) and remove the reference F ring.

10) FITTING THE ELECTRIC BRAKE AND RELEASE DEVICE

Should it be required, a reversible model can be made irreversible by fitting the EF Kit (Fig. 9):

- 1) Fix rotating disc DR to motor shaft A by means of screw VR using a thread-locking glue for more efficient tightening.
- 2) Insert steel wire F in spring-holder pin PM and in disc DF, making it also go through spring M and electromagnet E.
- 3) Use two screws VF to fix electric brake casing C to motor casing nuts D.
- 4) Manually pull the steel wire, if this lifts disc DF by more than 1 mm, loosen dowel GF and tighten dowel GR, so that the disc DF stroke is approximately 1mm; when this operation is completed, lock dowel GF in position.
- 5) Insert steel wire F into appropriate sheath G, which must have the cap resting against hood C.
- 6) Having fitted the gearmotor, guide the sheath inside the spring-holder shaft, trying not to create tight bends at points S.
- 7) Fully screw together two release knob elements P and insert steel wire F, until sheath G is compressed, then fix the wire to the lower knob element and lock dowel Gm.

11) EMERGENCY RELEASE

The emergency release device makes it possible to manoeuvre the roll-up door manually.

X130/X130P:

In the case of models without electric brake, simply open the lock, if fitted, and then manually lift the roll-up door, thereby forcing the gearmotor to a reversible movement.

X130EF/X130PEF:

Install the release control at a maximum height of 1.8 m.

In the case of models with no electric brake, unscrew the two release knob elements (Fig. 10) in order to release the gearmotor brake and thus allow the roll-up door to be opened manually. To reset motor-driven operation, retighten the knob.

In the case where the emergency release device is external, prepare a small safe provided with a personalised key, where to insert the release knob.

12) OPERATOR USE

Since the operator can be controlled remotely and therefore out of sight, all the safety devices must be regularly checked for perfect efficiency.

WARNING! In the case of any malfunction in the safety devices, request prompt assistance from qualified personnel.

Children must be kept at a safe distance from the operator working area.

13) CONTROL

The use of this operator allows roll-up door access to be automatically controlled. There are different types of control (manual, remote, magnetic card access, presence detector etc.) depending on the installation requirements and characteristics. See the relevant instructions for the various control systems.

14) MAINTENANCE

WARNING! Before carrying out any maintenance operation, disconnect the power supply.

These are the points which need checking and maintenance:

- Check that the roll-up door slides evenly along its entire stroke, without any friction. If the manoeuvre is difficult, grease the sliding tracks.
- Check the photocell optical elements, if any. Clean them occasionally.
- Check the safety edge, if any. Periodically check that the edge stops the roll-up door in the presence of any obstacle.
- Periodically check that the toothed crown wheel (Fig. 1-P) is lubricated.
- When any operation malfunction is found, and not resolved, disconnect the power supply and request the assistance of a qualified technician (installer). When the operator is out of service, activate the emergency release device in order to allow the roll-up door to be opened and closed manually.

15) SCRAPPING

Materials must be eliminated in compliance with the current regulations. In case of scrapping, the operator components do not entail any particular risk or danger. In case of materials to be recycled, these should be sorted out by type (electrical components, copper, aluminium, plastic etc.).

16) DISMANTLING

In the case where the operator is disassembled to be reassembled on another site, proceed as follows:

- Disconnect the power supply and the entire electrical installation.
- Remove the operator from its fixing base.
- Remove all the installation components.
- In the case where some of the components cannot be removed or are damaged, they must be replaced.

17) MALFUNCTION. CAUSES and REMEDIES**17.1) The roll-up door does not open. The motor does not turn.**

- 1) Check that the photocells are not dirty, engaged or misaligned.
Proceed as required. Check the safety edge.
- 2) If the motor is overheated, the thermal protection may be activated.
Wait for self-resetting to take place.
- 3) Check that the motor and the start capacitor are correctly connected.
- 4) Check that the electronic components are correctly supplied with power.
Check that the fuses are undamaged.
- 5) By means of the control panel diagnosis LEDs (see respective instructions), check whether the functions are correct. If any fault is found, identify the cause. If the LEDs show that a start command persists, check that there are no radio transmitters, start buttons or other control devices which keep the start contact activated (closed).
- 6) If the control panel does not work, it must be replaced.

17.2) The roll-up door does not open. The motor turns but there is no movement.

- 1) In the EF models, check that the electric brake is adjusted as shown in paragraph 10.
- 2) Check that the drive pulley and all the operator components are undamaged.

WARNINGS

Correct controller operation is only ensured when the data contained in the present manual are observed. The company is not to be held responsible for any damage resulting from failure to observe the installation standards and the instructions contained in the present manual.

The descriptions and illustrations contained in the present manual are not binding. The Company reserves the right to make any alterations deemed appropriate for the technical, manufacturing and commercial improvement of the product, while leaving the essential product features unchanged, at any time and without undertaking to update the present publication.

Fig. 1

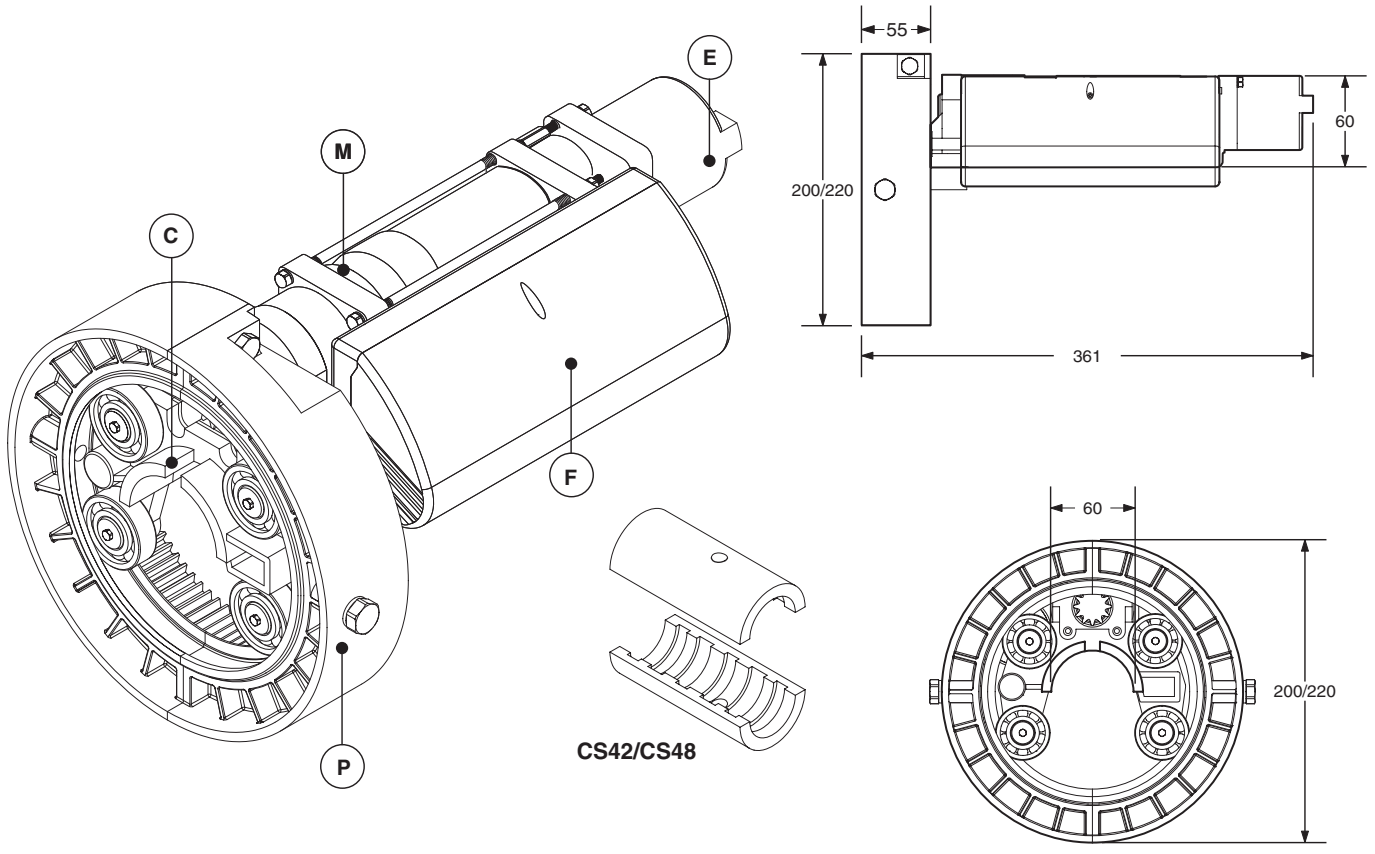


Fig. 2

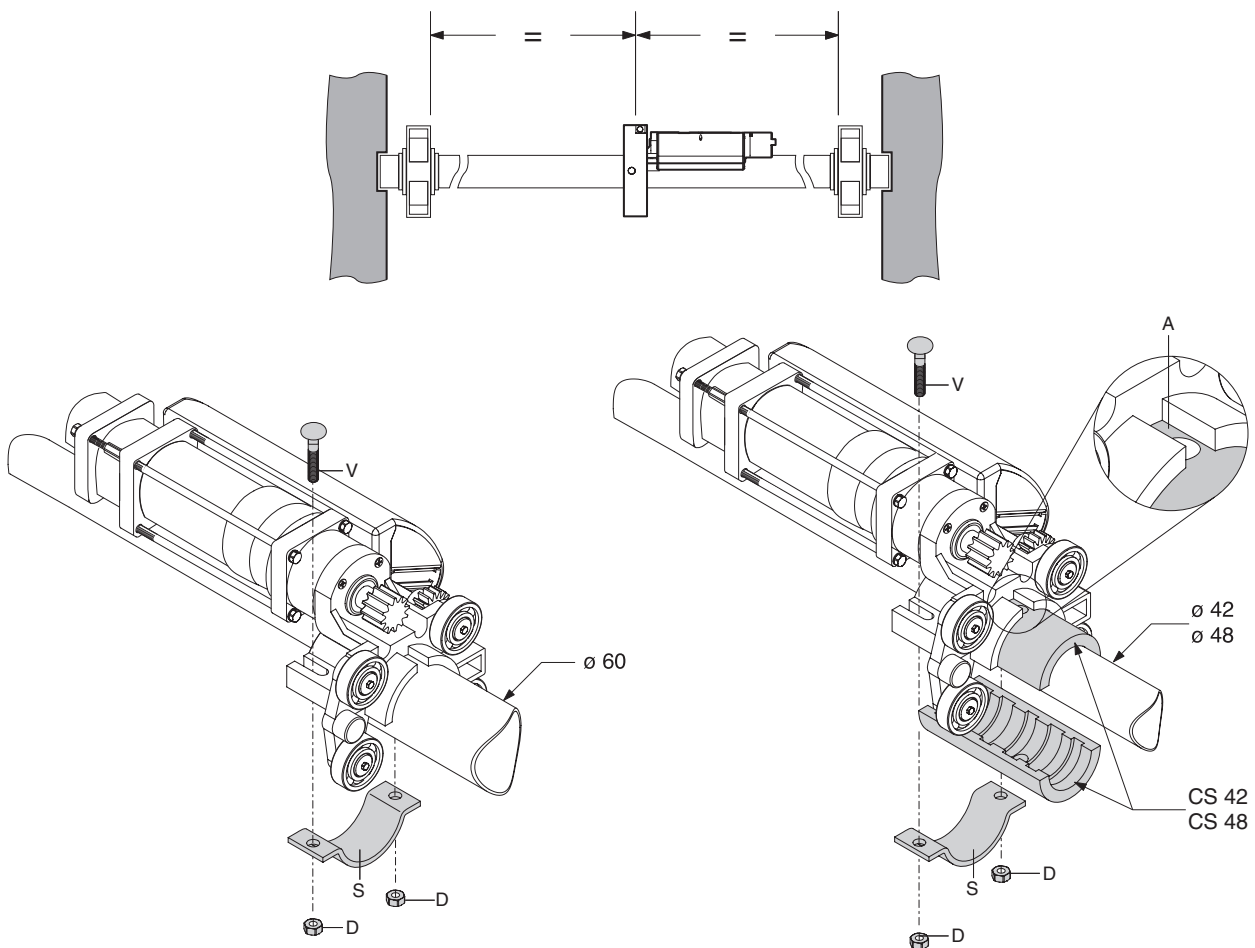


Fig. 3

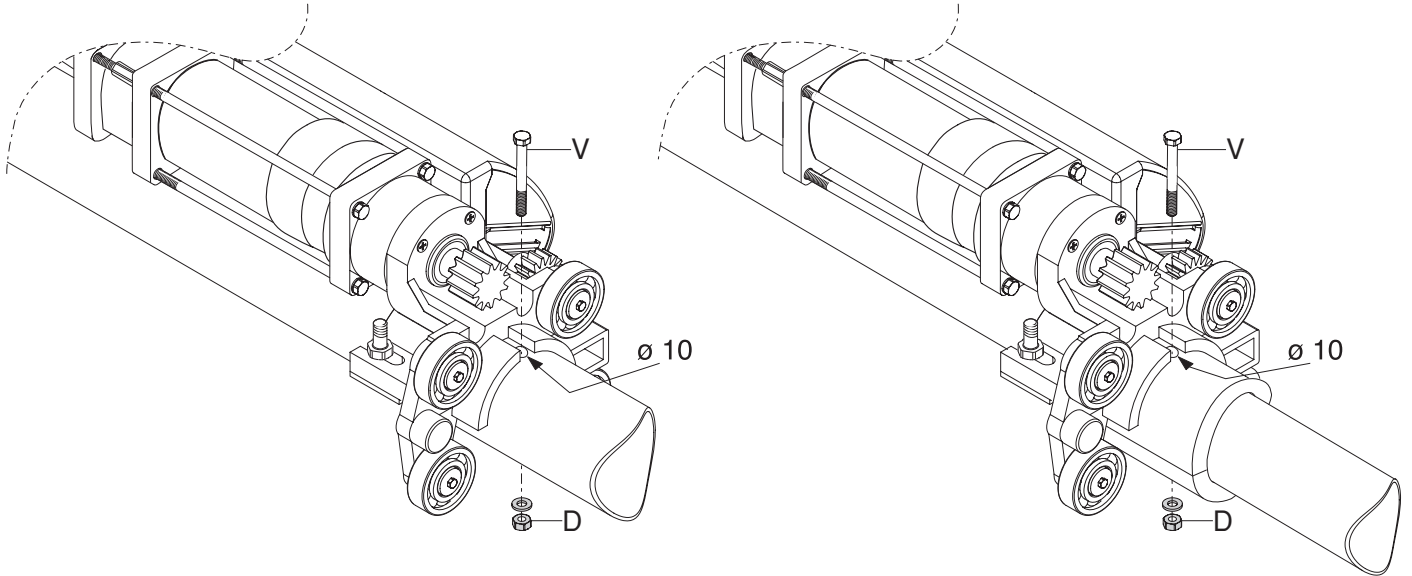


Fig. 4

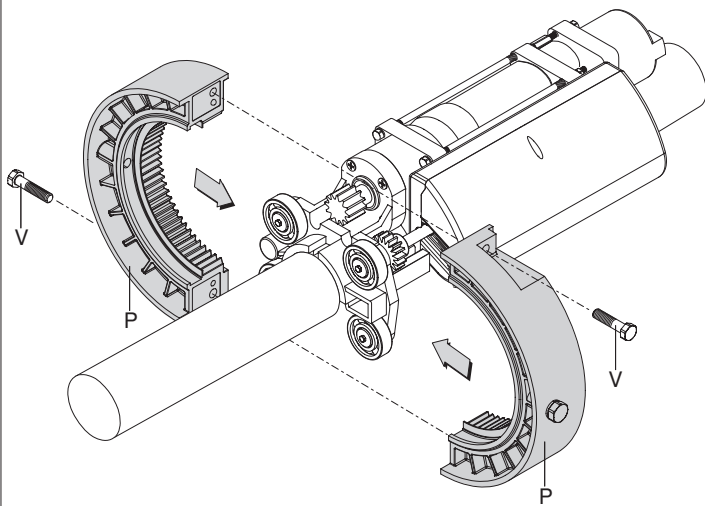


Fig. 5

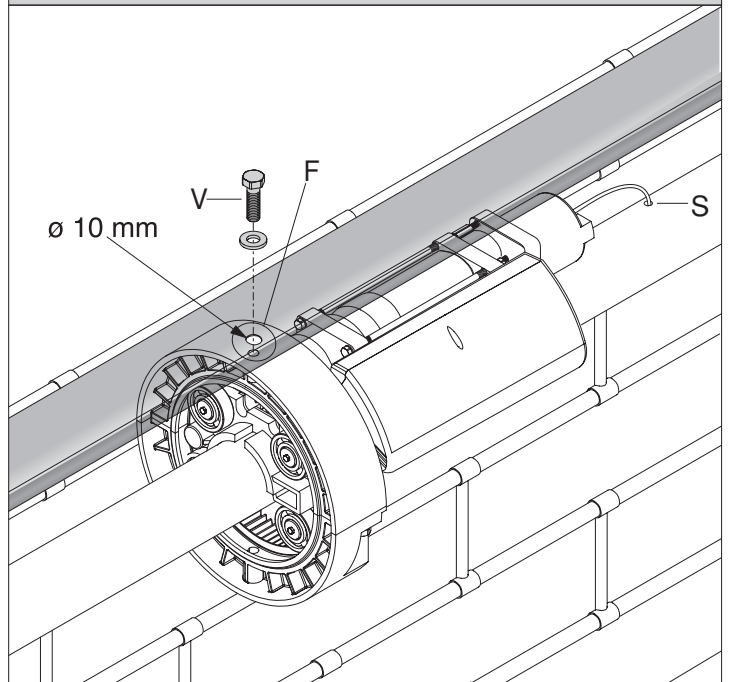


Fig. 6

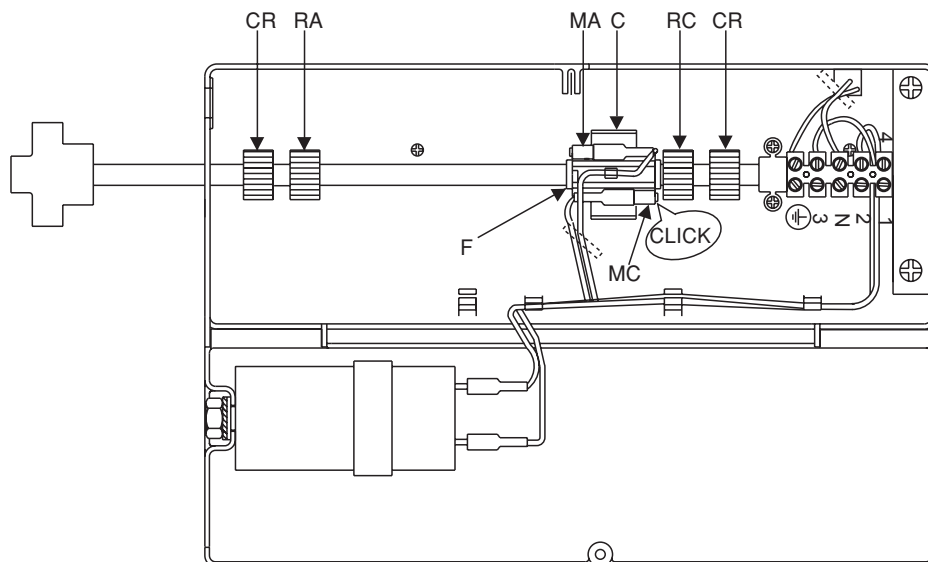


Fig. 7

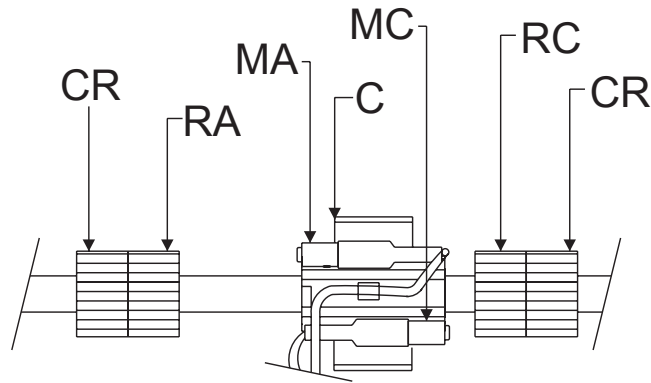


Fig. 8

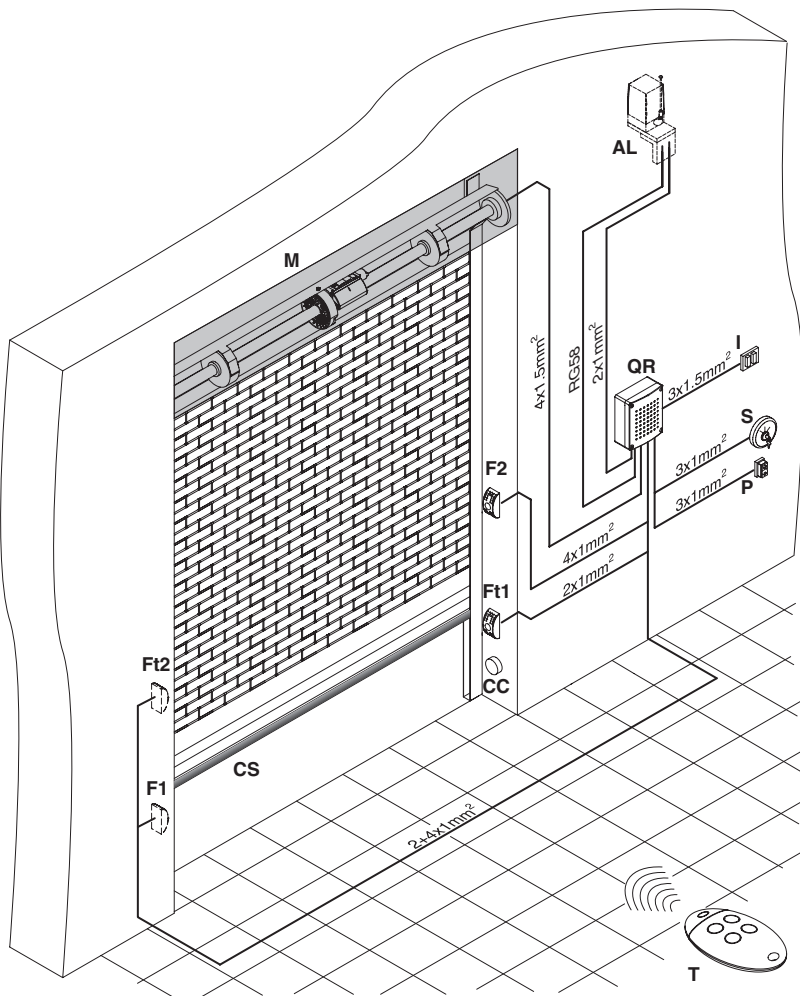


Fig. 9

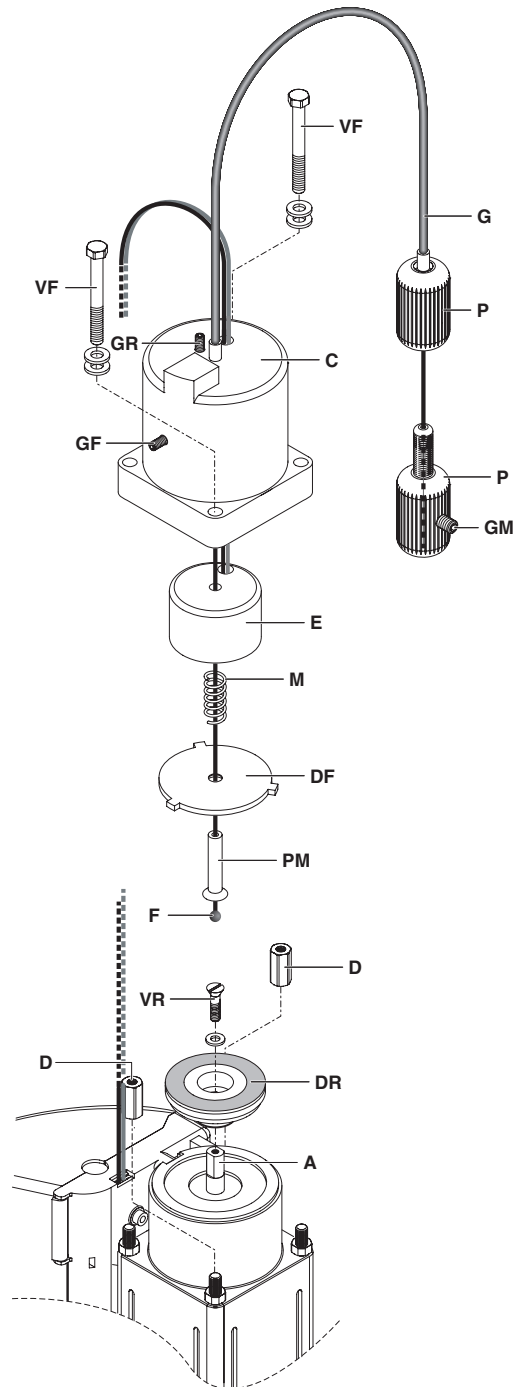


Fig. 10

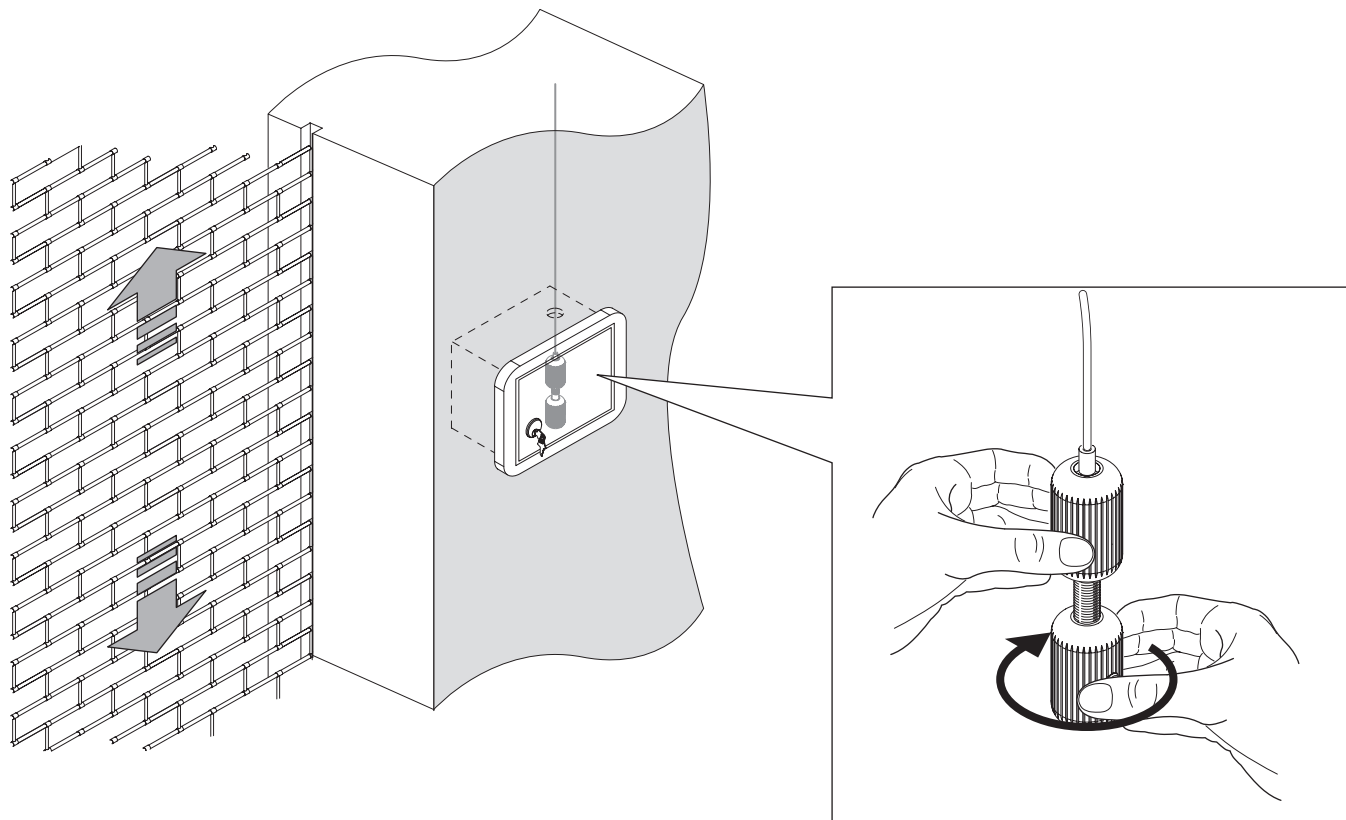
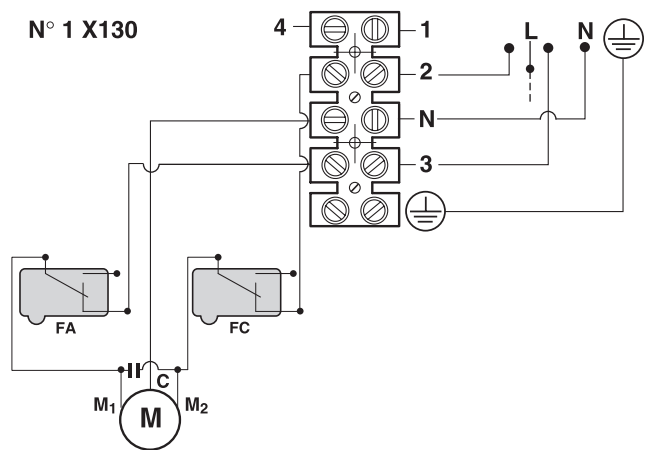


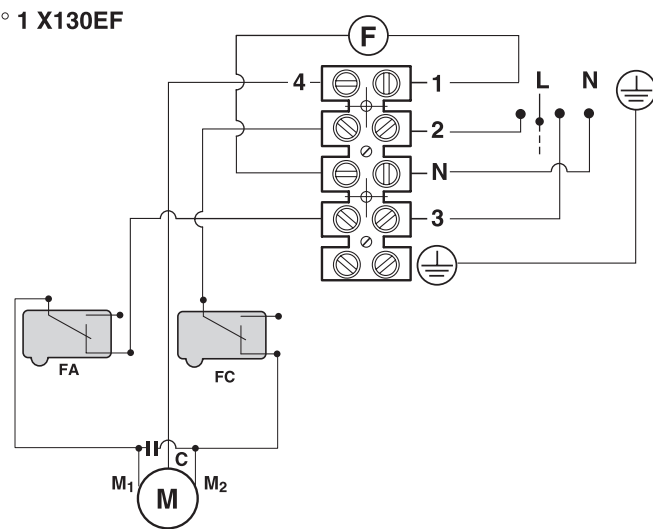
Fig. 11

M1 - Nero/Black/Noir/Schwartz/Negro/Preto
 C - Blu/Blue/Bleu/Blau/Azul/Azul Escuro
 M2 - Rosso/Red/Rouges/Rot/Rojos/Vermelos

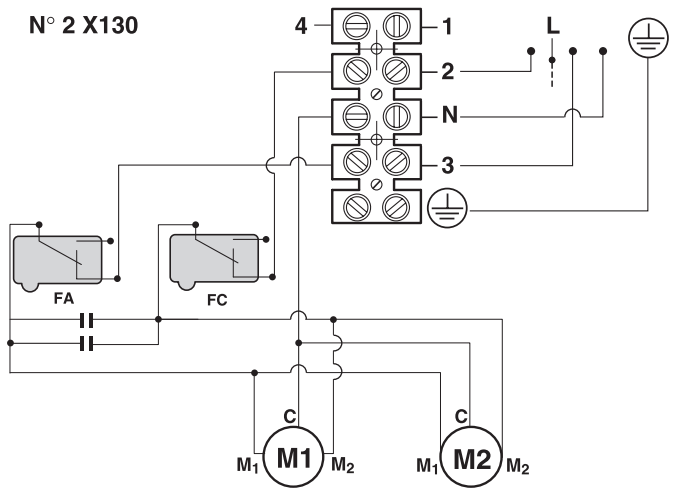
N° 1 X130



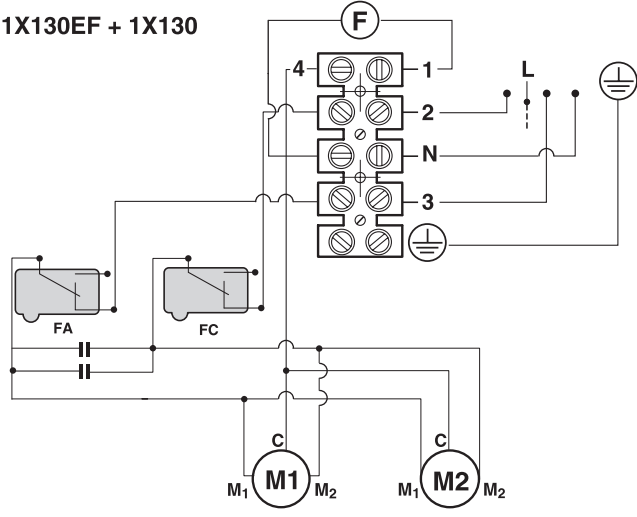
N° 1 X130EF



N° 2 X130



N° 1X130EF + 1X130



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