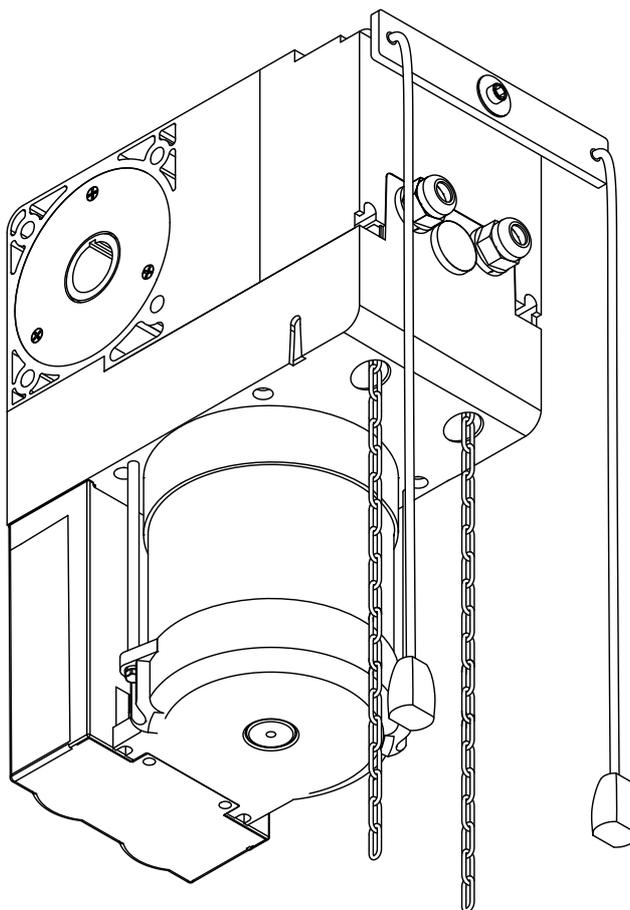


GB OPERATORS FOR INDUSTRIAL SECTIONAL DOORS



ULISSE

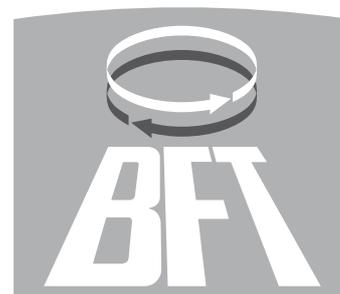


INSTALLATION AND USER'S MANUAL



**AZIENDA CON SISTEMA DI GESTIONE
INTEGRATO CERTIFICATO DA DNV
= UNI EN ISO 9001:2000 =
UNI EN ISO 14001:2004**

Via Lago di Vico, 44
36015 Schio (VI)
Tel.naz. 0445 696511
Tel.int. +39 0445 696533
Fax 0445 696522
Internet: www.bft.it
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**DICHIARAZIONE DI CONFORMITÀ / DECLARATION OF CONFORMITY / DÉCLARATION DE CONFORMITÉ
KONFORMITÄTSEKTLÄRUNG / DECLARACION DE CONFORMIDAD / DECLARAÇÃO DE CONFORMIDADE**
(Dir. 98/37/EEC allegato / annex / on annexe / anlage / adjunto / ficheiro IIB)

Fabbricante / Manufacturer / Fabricant / Hersteller / Fabricante / Fabricante:

BFT S.p.a.

Indirizzo / Address / Adresse / Adresse / Dirección / Endereço:

Via Lago di Vico 44
36015 - Schio
VICENZA - ITALY

- Dichiaro 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:

Motoriduttore per cancelli scorrevoli mod. / Gearmotor for sliding gates mod. / Motoréducteur pour portails coulissants mod. /
Getriebemotor für Schiebetore Modell / Motorreductor para cancelas correderas mod. / Motoredutor para portões de correr mod.

**ULISSE C, ULISSE C UP, ULISSE SB, ULISSE SC, ULISSE SC UP, ULISSE S SB,
ULISSE S SB-UPCA, ULISSE S SB-A**

- È conforme ai requisiti essenziali di sicurezza delle Direttive: / It 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 ('94), EN60335-2-103) (e modifiche successive / and subsequent amendments / et modifications successives / und ihren nachfolgende Änderungen / e modificações sucessivas / y modificaciones sucesivas).

COMPATIBILITÀ ELETTROMAGNETICA / ELECTROMAGNETIC COMPATIBILITY / COMPATIBILITÉ

ÉLECTROMAGNÉTIQUE / ELEKTROMAGNETISCHE KOMPATIBILITÄT / COMPATIBILIDAD

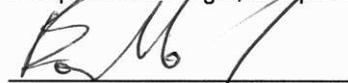
ELECTROMAGNETICA / COMPATIBILIDADE ELECTROMAGNÉTICA

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 MÁQUINAS / 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, 15/06/2007

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


(GIANCARLO BONOLLO)

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

Operator used to motorise residential and industrial sectional doors. Thanks to its compactness and fitting versatility, this operator can be installed in different ways.

Safety microswitches protect each manual manoeuvre command. The motor is provided with an electromagnetic brake to make the gearmotor irreversible.

The following versions are available:

ULISSE-C

Version with possible manual chain opening and closing.

ULISSE-CM

Version with possible manual chain opening and closing, and release for maintenance (the release mechanism disengages the motion drive from the door cable-winder shaft).

ULISSE-SB

Version with quick release for fast manual opening and closing.

ULISSE UP MODELS

Version with three-phase power supply.

"Hold-to-run" control option.

2) SAFETY

If correctly installed and used, this automation device satisfies the required safety level standards. However, it is advisable to observe some practical rules in order to avoid accidental problems. Before using the automation device, carefully read the operation instructions and keep them for future reference. Keep children, persons and things outside the automation working area, particularly during operation. Keep radio control or other control devices out of children's reach, in order to avoid any unintentional automation activation. Do not modify the automation components. Before proceeding to any external cleaning operation, disconnect the mains powers supply.

For any direct assistance to the automation system, request the help of a qualified technician (installer).

Access to the electrical compartment or to limit switches must be allowed to skilled personnel only.

3) USE

Depending on the type of control fitted, the automation system must be used in accordance with the instructions given by the installer in order to ensure safety for persons, animals and things.

4) EMERGENCY MANOEUVRE (Fig.1)

In the case of electric power failure, the door remains locked in the position it is found at.

Depending on the version installed, the manual manoeuvre is carried out as follows:

ULISSE-C

Use the appropriate chain to open/close the door. No operation is needed to reset the operator.

ULISSE-CM

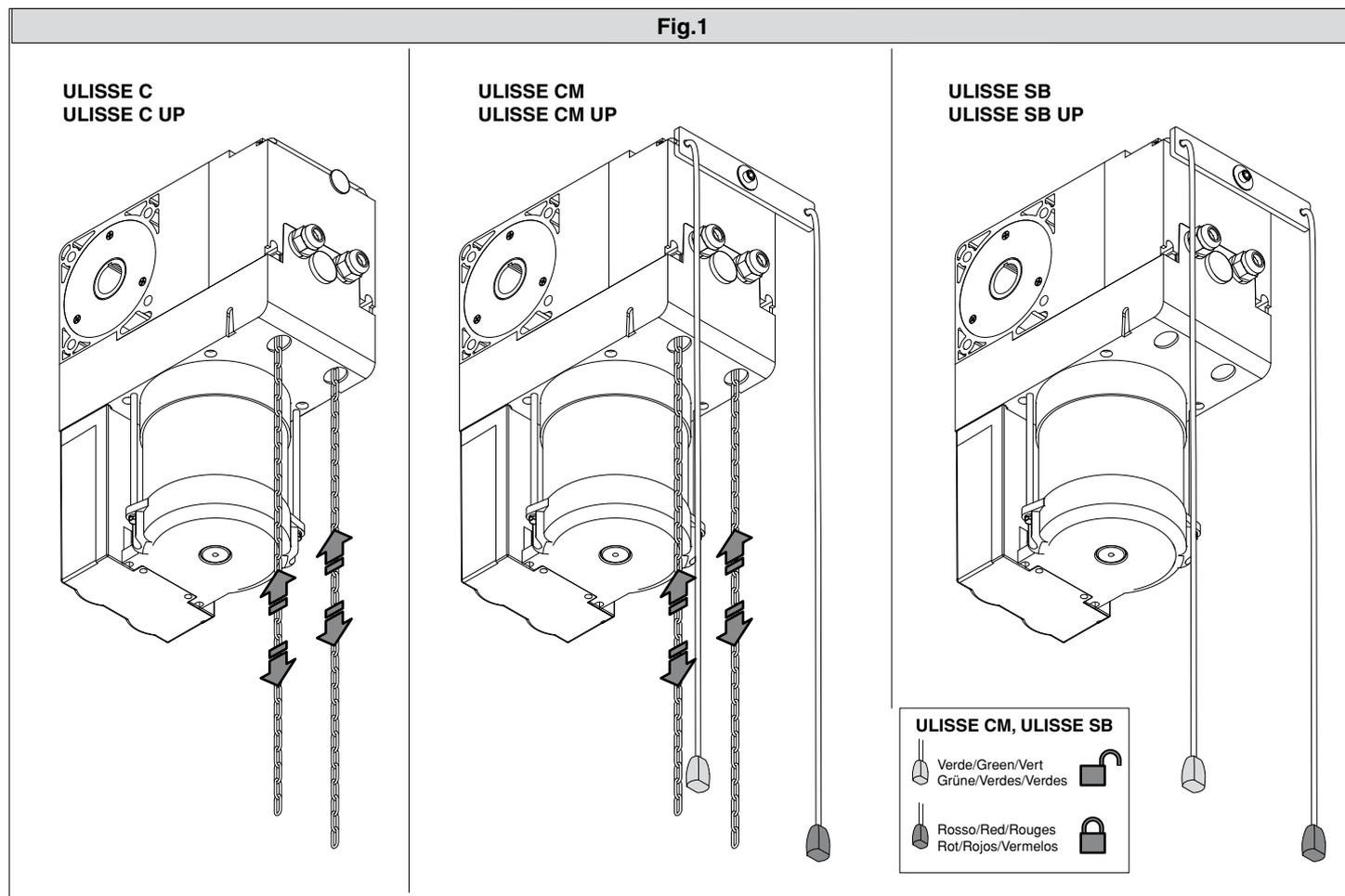
Use the appropriate chain to open/close the door.

When the door needs to be released for maintenance, pull the cord by means of the green knob. This disengages the motion drive from the door cable-winder shaft. This way the door can be manoeuvred manually. To reset motor-driven operation, pull the cord with the red knob. It may be necessary to help the door catching on by moving it manually by a few centimetres.

ULISSE-SB

Activate the release mechanism by pulling the cord with the green knob. This disengages the operator from the door, which can now be manoeuvred manually. To reset motor-driven operation, pull the cord with the red knob. It may be necessary to help the door catching on by moving it manually by a few centimetres. Important note: The door must be perfectly balanced and allow manual manoeuvre to be carried out easily.

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 SAFETY

- 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.
- Scrapping materials (plastic, cardboard, polystyrene etc) according to the provisions set out by current standards. Keep nylon and 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, 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.
- Fit an omnipolar or magnetothermal switch on the mains power supply, having a contact opening distance equal to or greater than 3 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 the automation system to earth.
- Only use original parts for any maintenance or repair operation. The Company declines all responsibility with respect to the automation safety and correct operation when other manufacturers' components are used.
- Do not modify the automation components, unless explicitly authorised by the company.
- Instruct the installation user about the control systems provided.
- 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, but always request the assistance of qualified personnel.
- Anything which is not expressly provided for in the present instructions, is not allowed.

2) GENERAL OUTLINE

Operator used to motorise residential and industrial sectional doors.

Thanks to its compactness and fitting versatility, this operator can be installed in different ways.

Safety microswitches protect each manual manoeuvre command. The motor is provided with an electromagnetic brake to make the gearmotor irreversible.

The following versions are available:

ULISSE-C

Version with manual opening and closing.

ULISSE-CM

Version with manual chain opening and closing, and release for maintenance (the release mechanism disengages the motion drive from the door cable-winder shaft).

ULISSE-SB

Version with quick release for fast manual opening and closing.

The power supplied to the accessories connected to the limit switches of the auxiliary contacts must be rated at 5 A max.

Each of the operators described above is available in the single-phase and three-phase version. Moreover, each operator is available in the fast version with a 4 pole motor (ULISSE S C - ULISSE S CM - ULISSE S SB).

ULISSE UP MODELS

Version with three-phase power supply.

"Hold-to-run" control option.

TABLE 1 - TECHNICAL SPECIFICATIONS

МОДЕЛЬ	ULISSE C* ULISSE CM** ULISSE SB***	ULISSE S C* ULISSE S CM** ULISSE S SB***	ULISSE C* ULISSE CM** ULISSE SB***	ULISSE S C* ULISSE S CM** ULISSE S SB***
Напряжение питания	230В ~±10% 50 Гц		400В ~±10% 50 Гц	
Двигатель	Однофазный		Трёхфазный	
Плюса, кол-во	6	4	6	4
Обороты - Коэф. передачи	22 об/мин. - 43	33 об/мин. - 43	22 об/мин. - 43	33 об/мин. - 43
Мощность	500 Вт	600 Вт	770 Вт	720 Вт
Крутящий момент макс.	45 Нм	40 Нм	65 Нм	65 Нм
Конденсатор	20µF		-	
Класс изоляции	F			
Вал сквозной	ø 25,4 mm			
Вал со звездочкой	нет	да	нет	да
Вес ворот макс. *	2500N=18 m ²	3500N=25 m ²	5000N=36 m ²	7000N=40 m ²
Концевые выключатели	Electromechanical, incorporated and adjustable			
Обороты кол-во макс.	27,5 оборотов			
Manual manoeuvre	ULISSE C*: ULISSE CM**: ULISSE SB***:		Chain winch Chain winch and quick release Quick release	
N. manoeuvres 24/h	240	168	500	500
Environmental conditions	-15°C ÷ + 55° C			
Вес привода	10 Kg			
Класс защиты	IP20			

* Depends on door construction type, refer to max. torque. This value is indicative.

3) MAIN OPERATOR COMPONENTS (fig. 1)

- A) Output shaft \varnothing 25.4 mm (1").
- B) Protection box for limit switch and terminal bar unit
- C) Quick release (ULISSE CM/SB only)
- D) Protection box for capacitors (ULISSE single-phase) or contactors (ULISSE three-phase UP)
- E) Motor unit
- F) Manual manoeuvre chain (ULISSE C/CM only)
- G) Adjustable fixing bracket

3) TECHNICAL SPECIFICATIONS

See Table 1

4) OPERATOR INSTALLATION

Preliminary checks:

- Check that the door is perfectly balanced.
- Check that the door slides along its entire stroke.
- Check the safety devices (parachute, cables etc.).
- If the door is not being installed for the first time, check all its components for wear.
- Repair or replace any faulty or worn parts.
- The operator reliability and safety are directly affected by the condition of the sectional door structure.

5) PREPARATION OF OPERATOR (for ULISSE C/CM only)

For C and CM models, you must complete the closed chain loop which allows the operator to be released by means of a winch. To do so, you only need to open the end rings from both sides of the piece of chain coming out of the operator, and complete the loop using the chain available inside the pack. Then close the rings which were previously opened taking care to realign the chain ends. Finally check that the joints are well formed by making them slide a few times inside the operator in both directions.

6) OPERATOR INSTALLATION

The operator can be installed either on the left or on the right of the sectional door.

Direct drive (for all versions)

The cable-winder shaft of the sectional door ($\varnothing=1\text{In } \varnothing 25,4 \text{ mm}$) must be provided with a keyway (Fig. 2 "C") and can be inserted directly into the operator through shaft. The operator is directly fastened to the wall using the appropriate bracket (Fig. 2 "G"). Some manufacturers of sectional doors supply joints with shaft, suitable for these types of operators.

For the S-SC, S-CM, S-SB models, this type of installation can be carried out on sectional doors with cable winders, having a diameter not greater than 80 mm in order to respect the maximum speed and therefore impact force prescribed by current standards.

Reduced drive (ULISSE S-C, S-CM, S-SB only)

Motion is transmitted to the cable-winder shaft by means of a chain drive, which may be provided with reduction ratio (Fig. 3).

WARNING: The chain drive must be protected in compliance with the current standards (Fig. 3 "P").

The gearmotor is fastened to the wall by means of the bracket supplied (Fig. 3 "G").

The drive dimensions must be in accordance with the impact curve prescribed by the current standards.

For this type of installation, a shaft with an 18 tooth pinion for a 1/2" x 5/16" simple chain (Fig. 3) can be supplied as an accessory.

Chain tension can be adjusted by moving the motor along the slots in the anchoring bracket (Fig. 3 "F").

7) ELECTRICAL INSTALLATION SETUP

Rearrange the electrical installation according to the relevant standards in force.

The interconnecting cables must not touch the motor stator. The cables should be kept at a safe distance. 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, the cable must be at least equal to H05 VV-F with a 4x1.5 sq mm section). To connect the auxiliary contacts, use cables with a minimum section of 1 mm². **Warning!** Keep the low voltage connections that supply power to the motor separate from the connections provided for the limit switches of the auxiliary contacts (extremely low safety voltage) and use suitable cable-holders (Fig. 1 P1-P2).

Fit an omnipolar circuit breaker with at least 3 mm contact opening, provided with protection against overloads, suitable for cutting out the operator from the mains.

The Sirio-FR and Mizar-FR panels are provided with a lockable switch and cutout fuses (Fig. 5). A single/double-channel receiver for radio transmitter can be inserted in the control panels.

Connection without control panel can only be carried out in case of single-phase version and in presence of "hold-to-run" control on three-phase versions (Fig.6).

Only use buttons having at least 10A-250V capacity.

WARNING: the power supply rating for the auxiliary contacts and limit switch contacts must be the same.

8) TERMINAL BAR CONNECTION

The cables must be held in position using an extra fixing device in the proximity of the terminals, e.g. with cable clamps.

WARNING: the connection of low-voltage safety accessories to the three-phase Up version is not allowed.

WARNING: the power supply rating for the auxiliary contacts and limit switch contacts must be the same. Mixed installation is forbidden.

WARNING: extremely low safety voltage cables must be physically separated from low voltage cables or be properly insulated with an extra sheathing having a thickness of at least 1 mm. Access to the electrical compartment or to limit switches must be allowed to skilled personnel only.

Fig. 6 shows the connection of the single-phase (Fig. 6 A-B), three-phase (Fig.6 C-D) gearmotor to the terminal bar and S SB-A, S SB-UPCA (Fig.6 E-F). For electrical connection to the control panel, make reference to the respective instruction manual.

- | | | |
|-----|------|--------------------------------|
| 1 | M1 | Motor and capacitor drive |
| 2 | CM | Motor common wire |
| 3 | M2 | Motor and capacitor drive |
| 4 | FCC | Closing end-of-stroke |
| 5 | FCA | Opening end-of-stroke |
| 6 | FCom | End-of-stroke common wire |
| 7 | | Stop auxiliary relay |
| 8-9 | | Opening auxiliary limit switch |

Connect the yellow/green cable to the earth terminal, Fig. 4A. The earth cable length must be greater than that of the active cables.

9) CONNECTION TO TERMINAL BOARD

Fig. 6 shows the connection of the single-phase and three-phase gearmotor to the terminal board.

For the electrical connection to the control unit, reference should be made to the manual of the control unit.

10) LIMIT SWITCH ADJUSTMENT (fig. 10)

The limit switch unit is situated on the head of the drive and is the system of adjustment. To gain access to the adjustment unit, dismantle the pinion-type quick release system, if any, and the box which covers the unit.

The microswitches are activated by two toothed cams which are locked in position by a holding spring.

When the door is closed, the "door closed" adjustment cam should activate the closing limit switch.

When the door is open, the "opening" adjustment cam should activate the opening limit switch.

Fig. 10 shows the position of the closing and opening limit switches in relation to the type of installation carried out.

If the adjustment cams are rotated towards each other, the stroke is increased. If the adjustment cams are rotated away from each other, the stroke is decreased.

The limit switch unit is equipped with a protection wedge "P" (fig.9) to prevent damage to the limit switches during manual installation manoeuvres.

Remove it only when adjusting the limit switches.

11) ADJUSTMENT OF END-OF-STROKE MICRO

WARNING: For safety reasons, microswitch adjustment must be carried out with the power supply off.

The adjustment unit features three microswitches: 2 for the limit switches and 1 to provide safety against overstroke on opening.

The overstroke microswitch, if activated by the cam, stops the system completely. This may be caused by an incorrect connection or a faulty limiting microswitch. If, during installation or maintenance, the cam intercepts an overstroke microswitch, the system will not accept any commands: the cam which intercepted the overstroke microswitch must be moved manually and the reason why the microswitch was intercepted must be established. Also make sure that the quick release mechanism or the manual chain-opening

system have not been activated. Both these manual manoeuvre systems are equipped with safety microswitches which, if activated, block any electrical command.

To adjust the end of the stroke proceed as follows:

- Close the door manually, keeping it slightly raised above the ground.
- Identify the closing microswitch according to the installation position of the gearmotor (fig. 10).
- The protection wedge "P" which places the limit switch drive (fig.9) in neutral.



-Remove it and throw it away only when adjusting the limit switch cam.

- Lift the holding spring from the cam teeth using a screwdriver (fig.10).
- Turn the cam in the direction of the closing microswitch until the triggering of the first limiting microswitch can be heard.
- Lower the spring until it engages with a cam tooth.
- Supply the system with power and give the start command to carry out the opening manoeuvre.

WARNING: If the motor rotates in the opposite direction, then vary the connections as follows:

- In the single-phase version (fig. 6A-B), invert the two connections in the power supply terminals of the motor "M1-M2".
- In the three-phase version (fig. 6C-D), invert two phases in the power supply terminals of the motor "U-V-W".
- Give the stop command when the door is near to the opening end-of-stroke stop.
- Disconnect the power supply and lift the holding spring from the cam teeth using a screwdriver (fig. 9-10).
- Turn the cam in the direction of the microswitch until the first triggering of the opening limiting microswitch can be heard.
- Lower the spring until it engages with a cam tooth.
- If the door stops during opening, keep trying to move the cam manually until complete opening is obtained.
- Check that opening and closing stops are carried out without traction or compression of the sectional door.
- Repeat the complete opening and closing manoeuvre a few times to check whether the limiting microswitches are activated correctly. If this is not the case, adjust the position of the cams as necessary.
- Whenever end-of-stroke adjustments are carried out, the cam holding spring must always be replaced in the teeth of the two adjustment cams.
- Re-fit all the parts which were previously removed for adjustment of the limit switches.

12) EMERGENCY MANOEUVRE (Fig.8)

In the case of electric power failure, the door remains locked in the position it is found at.

Depending on the version installed, the manual manoeuvre is carried out as follows:

ULISSE-C

Use the appropriate chain to open/close the door. No operation is needed to reset the operator.

ULISSE-CM

Use the appropriate chain to open/close the door.

When the door needs to be released for maintenance, pull the cord by means of the green knob. This disengages the motion drive from the door cable-winder shaft. This way the door can be manoeuvred manually. To reset motor-driven operation, pull the cord with the red knob. It may be necessary to help the door catching on by moving it manually by a few centimetres.

ULISSE-SB

Activate the release mechanism by pulling the cord with the green knob. This disengages the operator from the door, which can be manoeuvred manually. To reset motor-driven operation, pull the cord with the red knob. It may be necessary to help the door catching on by moving it manually by a few centimetres.

Important note: The door must be perfectly balanced and allow manual manoeuvre to be carried out easily.

13) OPERATOR CHECK

Before the operator finally becomes operational, scrupulously check the following:

- Check that all the components are tightly fastened.
- Check that all the safety devices (limit microswitches, photocells, safety edges etc.) operate correctly.
- Check that the safety edge antisquashing force stops the system within the limits provided for by the current standards.
- Check the emergency manoeuvre control.
- Check the opening and closing operations by means of the control devices fitted.
- Check the electronic logic for normal and customised operation, if a control panel is installed.

14) OPERATOR USE

Since the operator can be controlled remotely by means of a radio transmitter or Start button, and therefore out of sight, all the safety devices must be regularly checked for perfect efficiency.

In the case of any malfunction, request prompt assistance from qualified personnel.

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

15) CONTROL

The use of this operator allows the door to be opened and closed automatically. There are different types of control (manual, radio transmitter, magnetic card access etc.), depending on the installation requirements and characteristics. See the relevant instructions for the various control systems. The operator users must be instructed on control and use.

16) MAINTENANCE

Before carrying out any maintenance, disconnect the power supply.

- Periodically check if there are any oil leaks from the reduction gear.
- Periodically check the motion drive system and lubricate as necessary (only for reduced chain drive).
- Check all the door and operator safety devices.
- 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 door to be opened and closed manually.

17) DISMANTLING

WARNING! This operation should only be carried out by qualified personnel.

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

- Disconnected it from the power supply and the electrical installation.
- In the case where some of the components cannot be removed or are damaged, they must be replaced.

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. features unchanged, at any time and without undertaking to update the present publication.

Fig.1

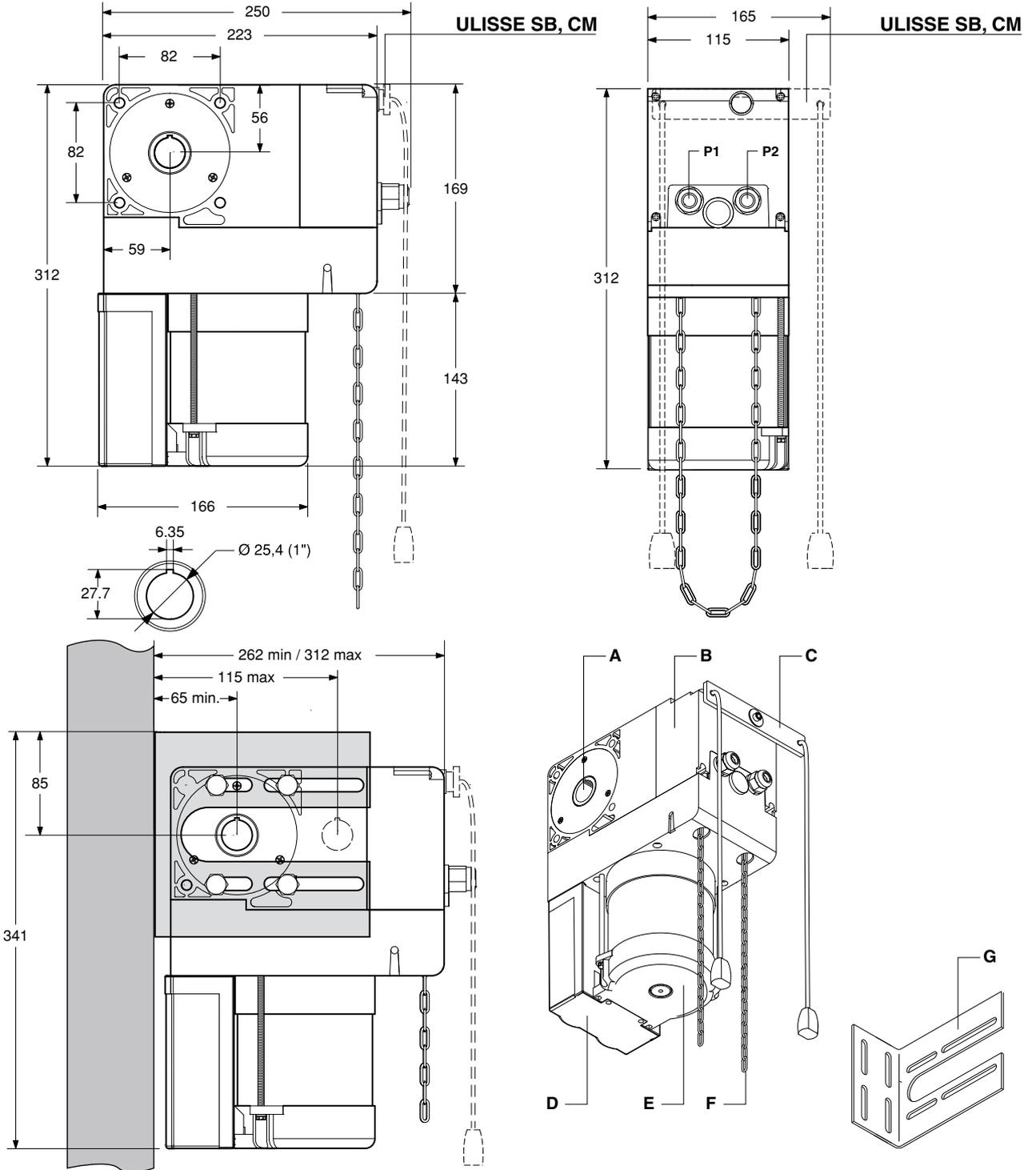


Fig.2

ULISSE C, CM, SB

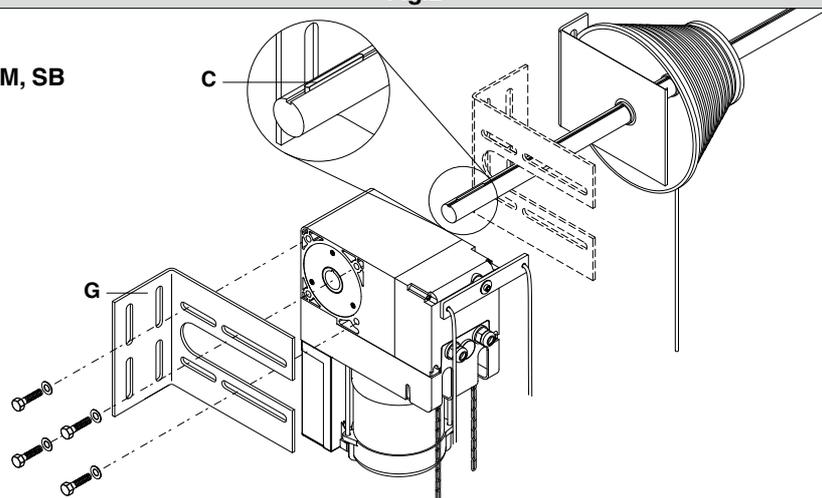
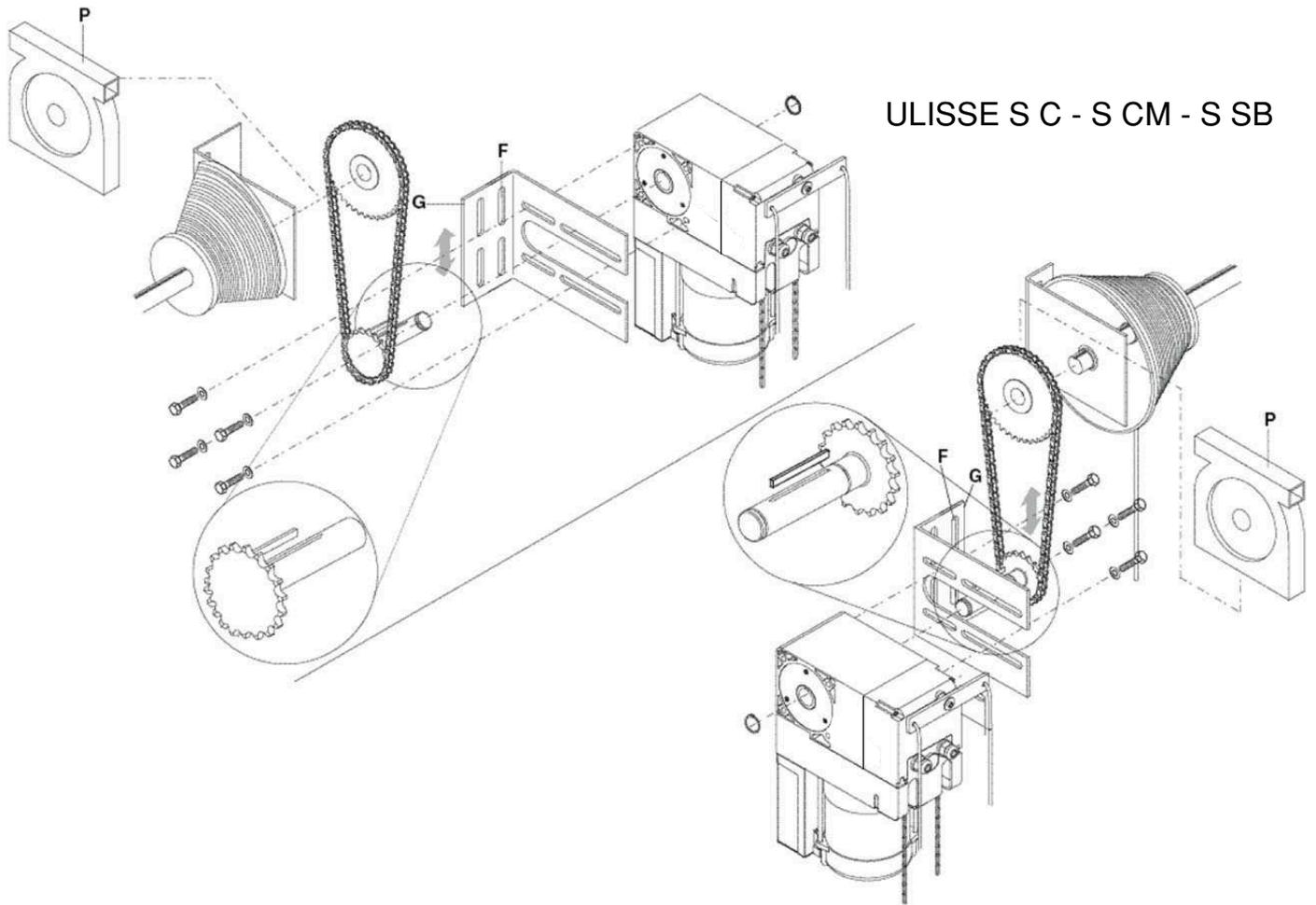


Fig.3



D811401_08

Fig.4

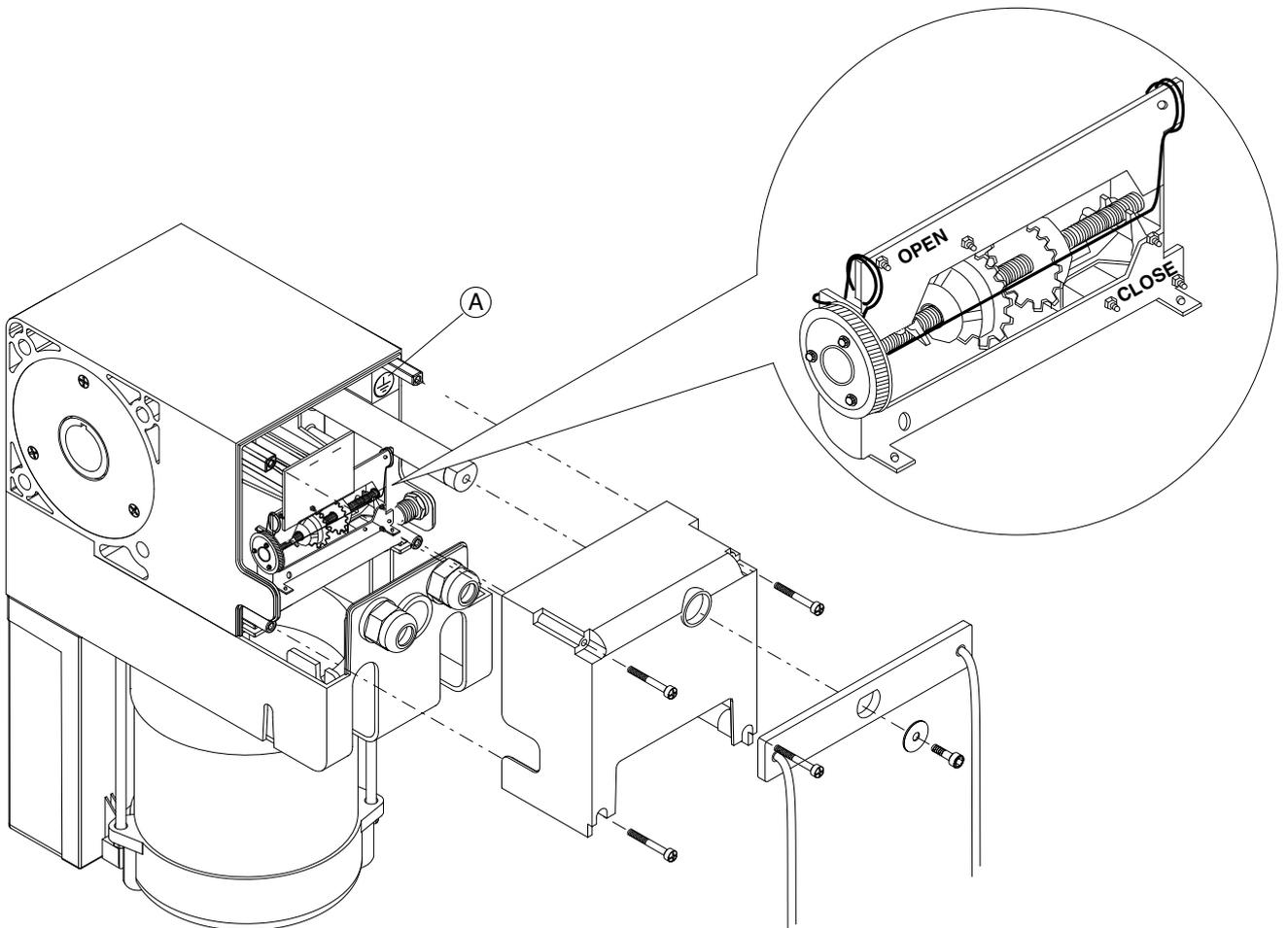


Fig.5

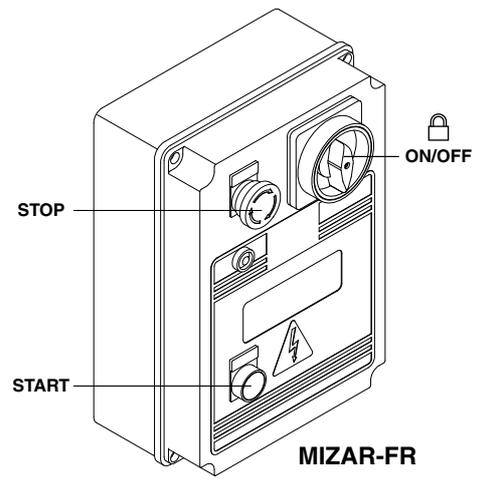
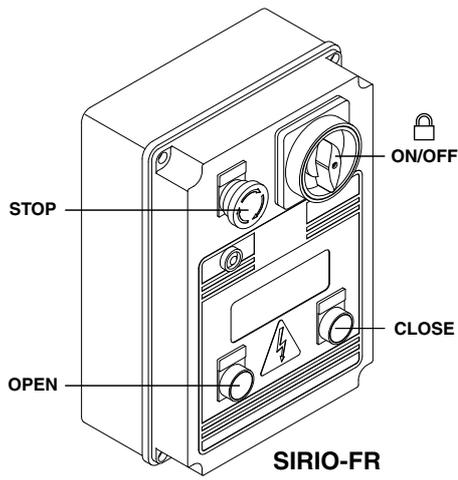
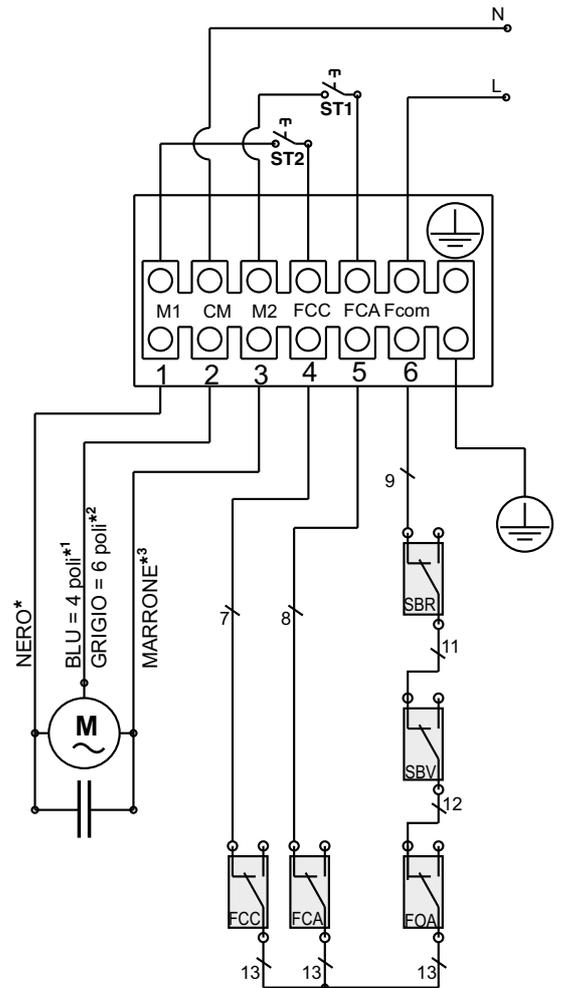
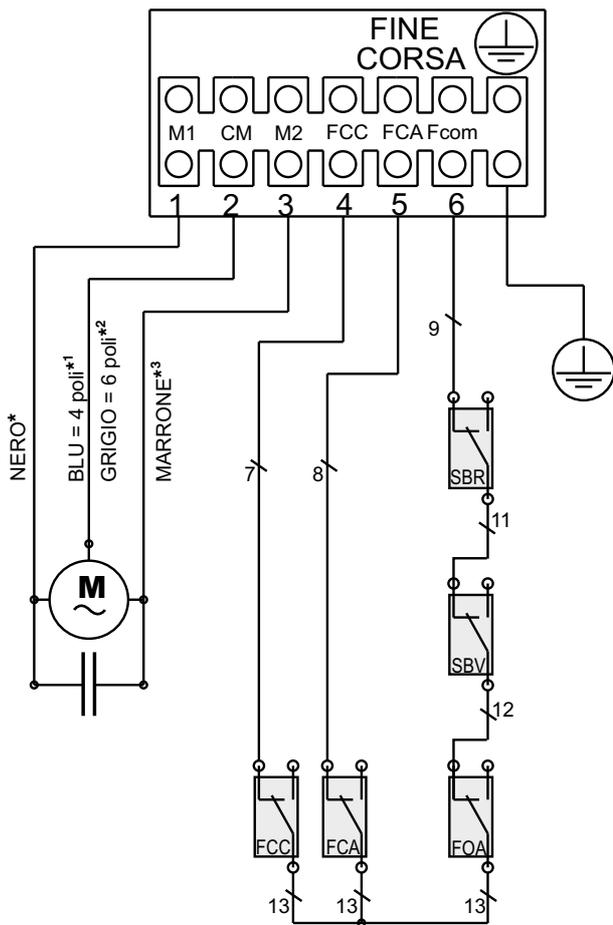


Fig.6

A ULISSE MONOFASE

B ULISSE MONOFASE

ST1 - ST2 = Control push-buttons.



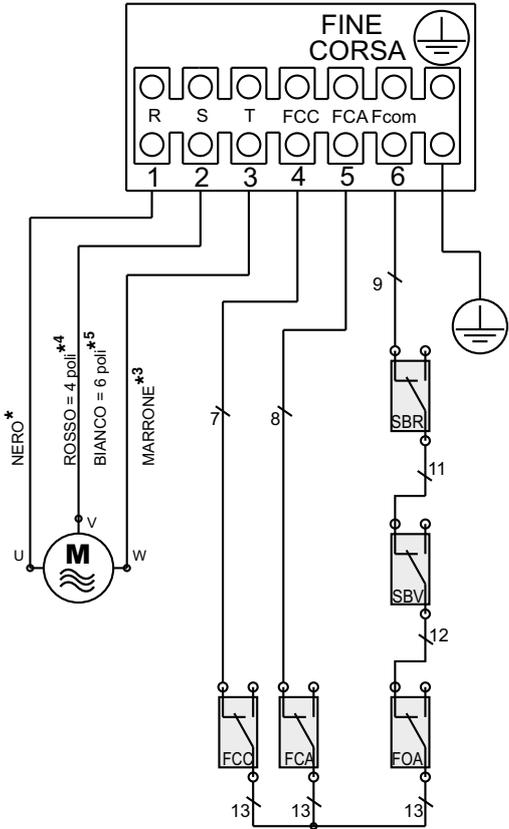
M1 = MARCIA MOTORE E CONDENSATORE
 CM = COMUNE MOTORE
 M2 = MARCIA MOTORE E CONDENSATORE

FCA = FINECORSAA APERTURA
 Fcom = COMUNE FINECORSAA
 FCC = FINECORSAA CHIUSURA

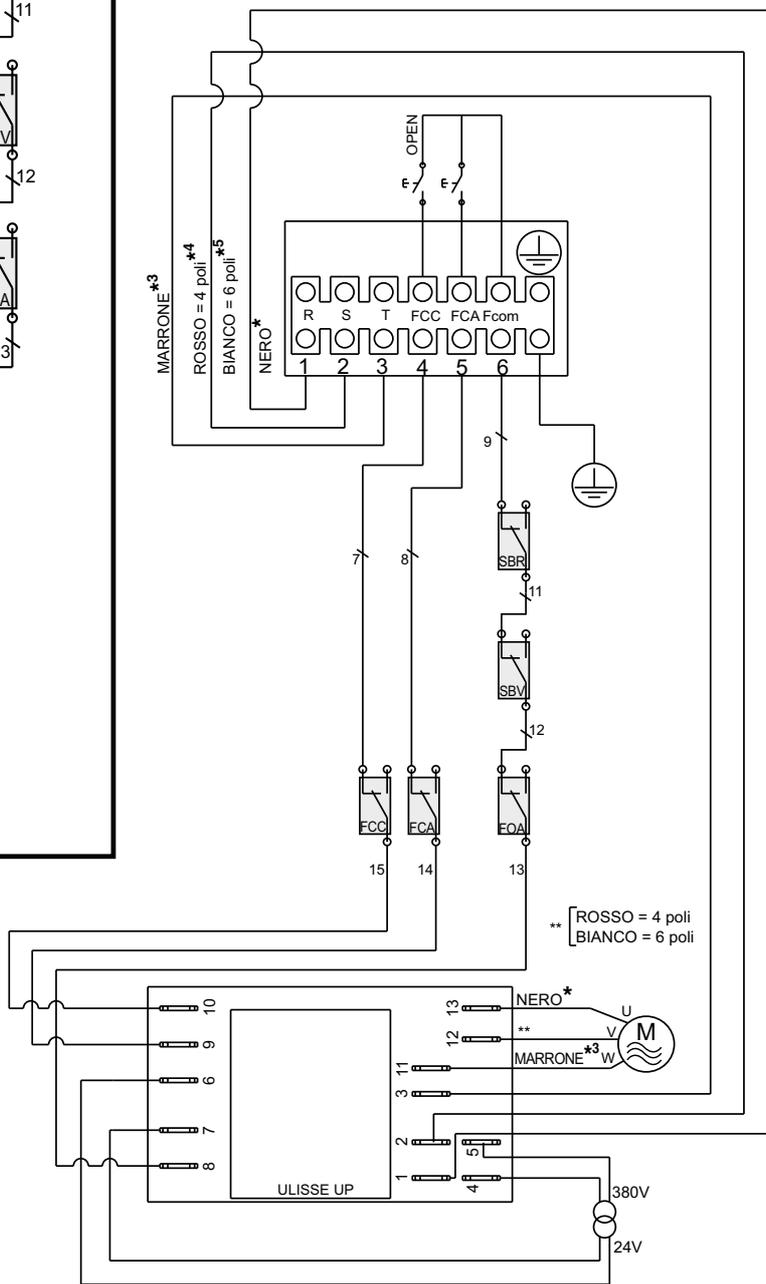
SBV = FINECORSAA CATENA VERRICELLO
 SBR = FINECORSAA SBLOCCOR RAPIDO
 FOA = F.C.OLTRECORSAA APERTURA

Fig.6

C ULISSE TRIFASE



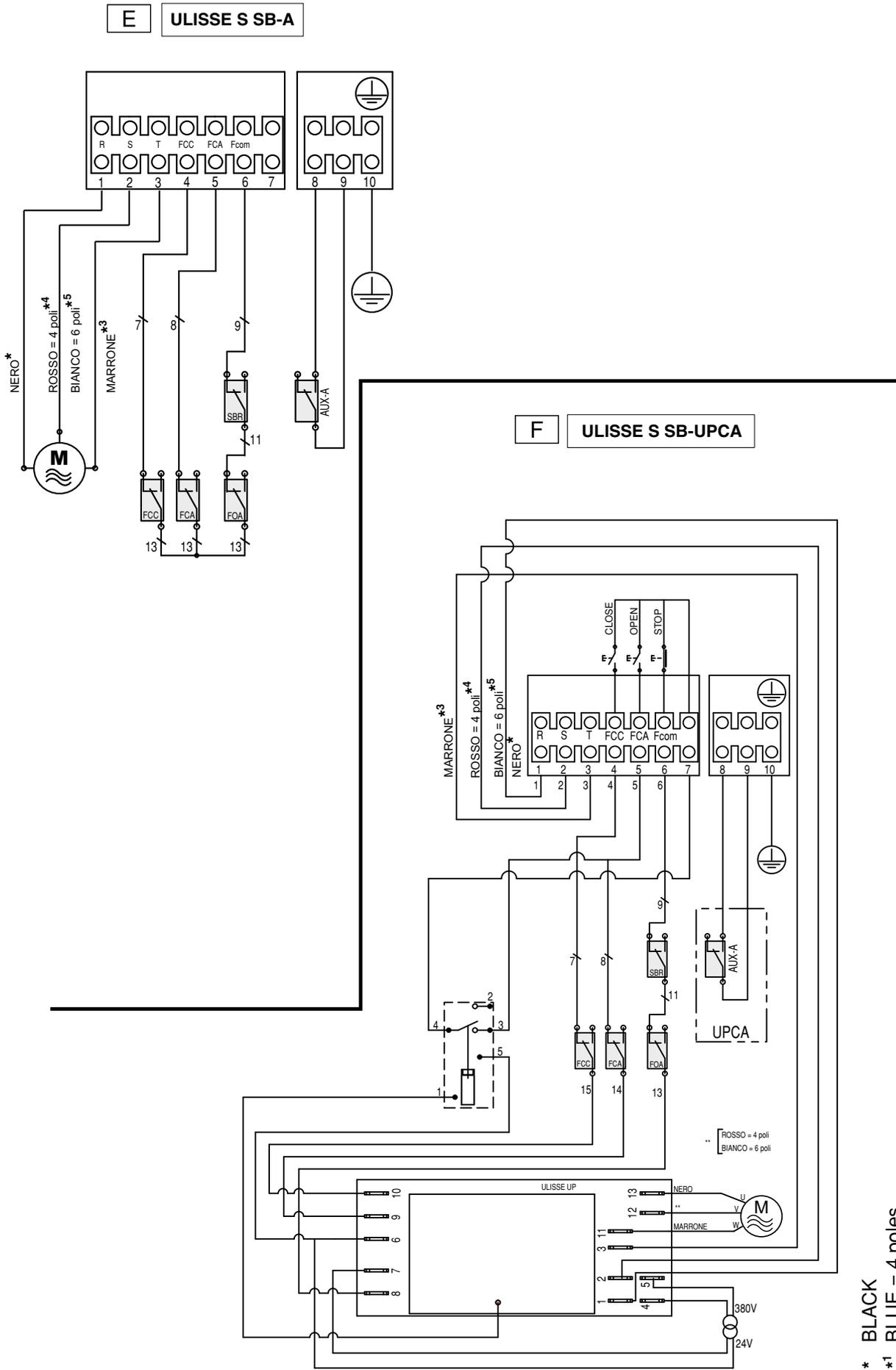
D ULISSE TRIFASE UP



** [ROSSO = 4 poli
BIANCO = 6 poli

- * BLACK
- *1 BLUE = 4 poles
- *2 GREY = 6 poles
- *3 BROWN
- *4 RED = 4 poles
- *5 WHITE = 6 poles

Fig.6



- * BLACK
- *1 BLUE = 4 poles
- *2 GREY = 6 poles
- *3 BROWN
- *4 RED = 4 poles
- *5 WHITE = 6 poles

Fig.7

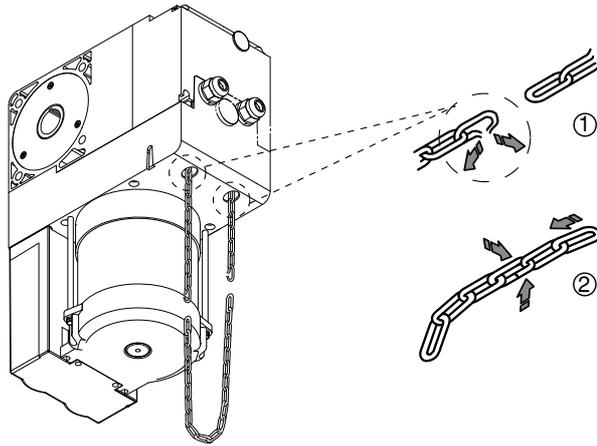
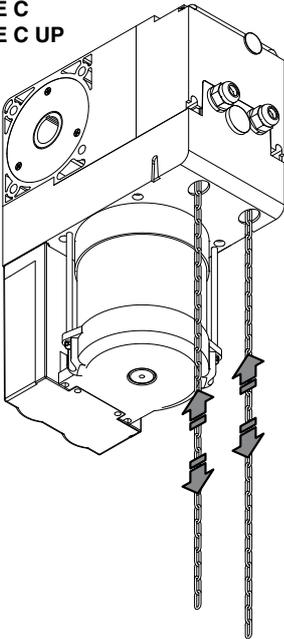
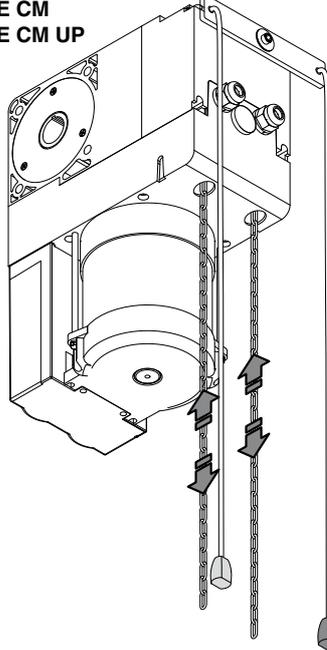


Fig.8

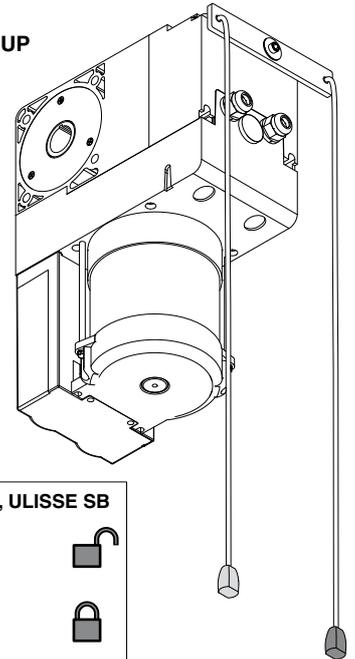
ULISSE C
ULISSE C UP



ULISSE CM
ULISSE CM UP



ULISSE SB
ULISSE SB UP



ULISSE CM, ULISSE SB

Green

Red



Fig.9

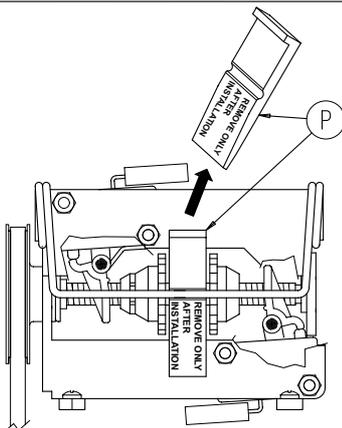
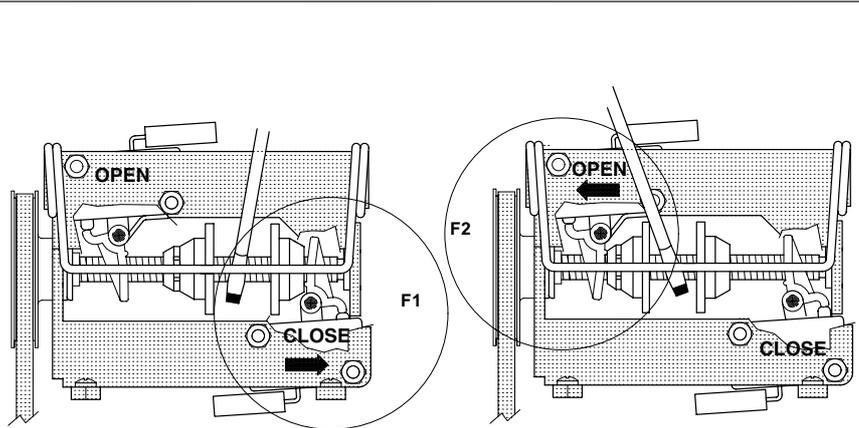


Fig.10



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