AUTOMATISMO ELETTROMECCANICO PER BARRIERA VEICOLARE
ELECTROMECHANICAL CONTROL DEVICE FOR VEHICULAR BARRIERS
AUTOMATISME ELECTROMECANIQUE POUR BARRIERE POUR VÉHICULES
ELEKTROMECHANISCHER ANTRIEB FÜR FAHRZEUGSCHRANKEN
AUTOMATISMOS ELECTROMECANICOS PARA BARRÉRAS VEHICULAR
AUTOMATIZAÇÃO ELECTROMECÂNICA PARA BARREIRA VEICULAR

ISTRUZIONI D’USO E DI INSTALLAZIONE
INSTALLATION AND USER’S MANUAL
INSTRUCTIONS D’UTILISATION ET D’INSTALLATION
INSTALLATIONS-UND GEBRAUCHSANLEITUNG
INSTRUCCIONES DE USO Y DE INSTALACIÓN
INSTRUÇÕES DE USO E DE INSTALAÇÃO
DICHIARAZIONE DI CONFORMITÀ / DECLARATION OF CONFORMITY / Déclaration de conformité
KONFORMITATSERKLÄRUNG / DECLARACIÓN DE CONFORMIDAD / DECLARAÇÃO DE CONFORMIDADE
(Dr. 98/37/EEC allegato / annex / on / annex / anlage / adjunto / ficheiro IIB)

Fabricante / Manufacturer / Fabricant / Hersteller / Fabricante / Fabricantes: BFT S.p.a.
Indirizzo / Adresse / Adresse / Adresse / Dirección / Endereço: Via Lago di Vico 44
36015 - Schio VICO VENETO - 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:
  
  Automatismo eletromecânico per barriere stradali mod. / Electromechanical control device for barriers mod. / Automatisme electromécanique pour barrières levantes mod. / Elektromechanische schrankenamtsbetrieb mod. / Automatismos electromecánicos para barreras mod. / Automatização electromecânica para barreira estradial mod.

MICHELANGELO

- 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 Sinn der MÄCHINEN-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 DIRECÇÃO MAQUINAS

- È conforme ai requisiti essenziali di sicurezza delle Direttive: / Il 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: / É conforme a os requisitos essenciais de segurança das Diretivas: / Está conforme aos requisitos essenciais de segurança das Directivas

BASSA TENSIONE / LOW VOLTAGE / BASSE TENSION / NIEDERSPANNUNG / BAJA TENSION / BAXA TENSÃO 73/23/CEE (EN60335-1 (02)) (e modifiche successive / and subsequent amendments / et modifications successives / und ihren nachfolgenden Änderungen / e modificazioni successive / y modificaciones sucesivas).

COMPATIBILITA ELETTROMAGNETICA / ELECTROMAGNETIC COMPATIBILITY / COMPATIBILITÉ ELECTROMAGNÉTIQUE / EMAGNETISCHE KOMPATIBILITÄT / COMPATIBILIDADE ELETTROMAGNETICA / COMPATIBILIDADE ELECTROMAGNÉTICA 89/336/CEE, 91/263/CEE, 92/311/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 nachfolgenden Änderungen / e modificazioni successive / y modificaciones sucesivas).


- Si dichiara che è esistita 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 production 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 MASCHIEN-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 MAQUINAS.

SCHIO, 12/1/2006

Il Rappresentante Legale / The legal representative / Le Représentant légal / Der gesetzliche Vertreter / El Representante Legal / O Representante legal

(SIGNATURE)
Thank you for buying this product. Our company is sure that you will be more than satisfied with the performance of the product. This product is supplied with a “WARNINGS” leaflet and an “INSTRUCTIONS MANUAL”. These should both be read carefully as they provide important information about safety, installation, operation and maintenance. This product complies with recognised technical standards and safety regulations. We declare that this product is in conformity with the following European Directives: 89/336/CEE, 73/23/EEC, 98/37/EEC and subsequent amendments.

1) GENERAL OUTLINE
Compact electromechanical barrier suitable for limiting private areas, parkings, access areas for vehicles only. Available for passageways from 6 to 8 metres. Adjustable electronic limit switches, they guarantee correct boom stopping position. In case of intensive use, a thermal sensor activates the cooling fan.

The emergency release device for manual manoeuvre is controlled by a personalised key lock.

The actuator is always supplied for left-hand side fitting. However, when necessary, the opening direction can be reversed by means of simple operations.

The BM mod. foundation base (on request) makes barrier installation easier.

Appropriate fittings make it easy to install accessories without needing to drill any holes.

WARNING! The barrier must be exclusively used for vehicles to drive through. Pedestrians must not walk within the operator manoeuvring area.

An appropriate pedestrian passageway must be provided for.

2) EMERGENCY RELEASE
(Fig.1)
The emergency release allows the bar to be manoeuvred manually. It is activated from the outside of the box by inserting the personalised key into the lock placed under the bar and rotating it anticlockwise by 90°.

WARNING!
When an actuator without bar needs to be released, ensure that the balancing spring is not compressed (bar in the opening position).

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.

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.
1. By directly fixing the

2. Lay the wiring needed for photocell connection.

3. Fit the photocell as shown in Fig. 12 by means of the appropriate

4. Connect the control and safety devices in conformity with the previously

5. The main automation components are (fig.10):

6. During the closing operation, the balancing spring must

7. WARNING! Never remove the screw in Fig.7 Ref.7 before having

8. WARNING! For connection to the mains, use a multipolar cable having

9. WARNING! Before opening the door, the spring must be unloaded

10. ELECTRICAL INSTALLATION SET-UP

WARNING! The cables must not be connected to any auxiliary connections exceed 50-metre lengths or go through critical

The following procedure:

C) Completely loosen the spring-stretcher "fig.7/ref.2" in order to remove

D) Remove the boom locking bracket "fig.7/ref.4" and use a CH19

E) Turn the lever "fig.7/ref.6" by 90° and insert it correctly in position

F) Press the release key "fig.7/ref.4" and bring the bar to the

G) Fit the spring unit in the position shown in "fig.7/ref.Dx" by means of

H) Adjust the spring stretcher (fig.7/ref.2) until the spring comes under

I) Refit and partially fix the U bolt (fig.7/ref.4) holding the bar to the

J) Balance the boom as described in relevant paragraph 6.

K) Adjust the lock (fig.7/ref.5) of the U bolt (fig.7/ref.4) until the spring is compensated.

L) Complete the fixing by means of the screws M12 (fig.7/ref.1) and the washers.

M) AVOID THE FOLLOWING OPERATIONS:

N) SET THE FIRST BAR IN THE POSITION SHOWN IN "FIG.14" (DEPENDING ON WHETHER THE CELLULA 130 IS TO BE FITTED VERTICALLY OR HORIZONTALLY).

O) AT THE END OF THE MOUNTING WORK, COMPLETE THE ADJUSTMENT OF THE LIMIT DEVICES AND THE PROTECTION GUARD.
JP11
15-16: START button (N.O.).
15-17: STOP button (N.C.). If not used, leave the jumper bridged.
15-18: Photocell input (N.C.). If not used, leave the jumper bridged.
15-19: Photocell FAULT input (N.O.) for photocells provided with N.O. check contact (see Fig.19).
15-20: Safety edge input (N.C.). If not used, leave the jumper bridged.

JP12
21-22: Barrier-open warning light output (N.O. contact, 24V~/3W max) or, in alternative, alarm output (see configuration, paragraph 14).

JP9
23-24-26-28: Encoder inputs
15-25: APRI button (OPEN N.O.). If kept pressed for over 3 sec., it switches to clock input (TIMER N.O.).
15-27: CHIUDE button (CLOSE N.O.)

13) PROGRAMMING
The control panel provided with a microprocessor is supplied with function parameters preset by the manufacturer, suitable for standard installations. The parameters predefined can be changed by means of the incorporated display or by means of the universal programmer.
In the case where programming is carried out by means of the universal programmer, carefully read the relevant instructions.
Connect the UNIFLAT accessory in the direction indicated in Fig.20.
In the case where programming is carried out by means of the incorporated display, refer to Fig. A and B and to the “configuration” paragraph.

5- Slow-down torque (Sl:old b:or q:UE) [50%]
Set from 0% to 99% the torque to be applied during the slow-down phase. The initial slow-down value is automatically calculated according to this parameter and the effective movement speed.

6- Emergency braking (E:P:er b:r-R:he) [50%]
Set braking intensity for emergency braking: 0% corresponds to normal slow-down, 99% to immediate stop.

7- Opening value calibration (c:R:L c:h) [150.0]
Set the reference value from 0.0 to 200.0 for the required opening position (see Paragraph 13, Special parameter 1 on second-generation universal programmers).

8- Closing value calibration (c:R:L c:h) [050.0]
Set the reference value from 0.0 to 200.0 for the required closing position (see Paragraph 13, Special parameter 2 on second-generation universal programmers).

9- Alarm time (R:R:R:R. t:if:E) [30s]
In the case of obstacle detection or photocell engagement, at the end of the time set (ranging from 10s to 240s) the SCA contact is closed. The contact is subsequently opened by the STOP command or by triggering of the closing limit switch. Only active when the SCA Alarm logic is set to OFF.
If set to 0 s, the SCA contact becomes a connection to the Parky system.

10- Zone (Z:one) [0]
Set the zone number between a minimum value of 0 and a maximum value of 127.

14.2) Logic Menu (L:og l:ic)
- TCA (c:n:F) [ON]
  ON: Activates automatic closing
  OFF: Excludes automatic closing
<table>
<thead>
<tr>
<th>Barrier</th>
<th>2 steps</th>
<th>3 steps</th>
<th>4 steps</th>
</tr>
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</table>

**ENGLISH**
The extent of the movement depends on the effective boom length: in the case of a 6-m boom, a unit change (1.0) entails a movement of about 2.2 cm which, proportionally, becomes about 2.9 cm for an 8-m boom.

The effective closing value also depends, in part, on the manoeuvring speed. It is therefore convenient to proceed to end-of-stroke calibration only after having set the other opening parameters.

To evaluate correctly the values set, you are advised to carry out a few complete consecutive manoeuvres.

17) EMERGENCY RELEASE (Fig. 14)

The emergency release allows the bar to be manoeuvred manually. It is activated from the outside of the box by inserting the personalised key into the lock placed under the bar and rotating it clockwise by 90°.

WARNING! When an actuator without bar needs to be released, ensure that the balancing spring is not compressed (bar in the opening position).

18) 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.

19) CONTROL

The automation system is used to obtain motorised access control. There are different types of control (manual, remote, magnetic badge, mass detector etc.) depending on the installation requirements and characteristics. For the various control systems, see the relevant instructions.

20) MAINTENANCE

WARNING: before opening the door, the spring must be unloaded (vertical boom). WARNING: Before carrying out any maintenance to the installation, disconnect the mains power supply. The following points need checking and maintenance:

- Photocell optics. Clean occasionally.
- Electric edge. Carry out a periodical manual check to ensure that the edge stops the bar in case of obstacles.
- Dismantle the gearmotor and replace the lubricating grease every two years.
- When any operational malfunction is found, and not resolved, disconnect the mains power supply and require the assistance of a specialised technician (installer). When automation is out of order, activate the emergency release (see paragraph 17) so as to release the manual bar opening and closing operations.

21) 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.).

22) DISMANTLING

WARNING: before opening the door, the spring must be unloaded (vertical boom). When the automation system is disassembled to be reassembled on another site, proceed as follows:

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

23) MALFUNCTION: CAUSES and REMEDIES

23.1) The bar does not open. The motor does not turn.

WARNING: before opening the door, the spring must be unloaded (vertical boom).

1) Check that the photocells are not dirty, or engaged, or not aligned.
   Proceed accordingly. Check the electric edge.
2) Check the correct connection of the drive motor and capacitor.
3) Check that the electronic appliance is correctly supplied. Check the integrity of the fuses.
4) Use the control unit self-diagnosis (see par. 14.6), to check whether the functions are correct. Identify any possible cause for the fault.
   If self-diagnosis indicates that a start command persists, check that there are no radio transmitters, start buttons or other control devices keeping the start contact activated (closed).

5) If the control unit does not work, it must be replaced.
6) Check the activation of the reference microswitches by checking the messages appearing on the control panel display.

23.2) The bar does not open. The motor turns but there is no movement.

1) The manual release was left engaged. Reset the motorised operation.
2) If the release is in the motorised operation position, check the gearmotor for integrity.

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.
**ACCESS TO MENUS**

Press the OK key

OK

+/-

+/-

ok

Log lc.

+/-

ok

+/-

ok

**FOLLOWING MENUS**

FIG. B

**LEGENDA**

Simultaneously press the + and - keys.

Simultaneous pressure of the + and – keys allows you to exit the active menu and return to the preceding menu; if this takes place at the main menu level, programming is exited and the display switched off. The modifications made are only confirmed if the OK key is subsequently pressed.

- Simultaneous pressure of the + and – keys allows you to exit the active menu and return to the preceding menu; if this takes place at the main menu level, programming is exited and the display switched off.

- Press OK key (Enter/confirm)

- OK

- Menu scrolling

- (+ = preceding   - = following)

- OK

- Parameter increment/reduction or ON/OFF commutation

- PrG

- Message: Programming in progress

- OK

- Message: KO! (value or function error)

- OK

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