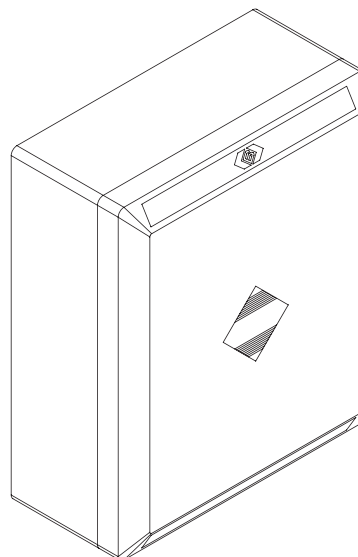


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Rev. 05/04/01

# BENINCA®

CENTRALE DI COMANDO  
**CONTROL UNIT**  
*STEUEREINHEIT*  
**CENTRALE DE COMMANDE**  
CENTRAL DE MANDO  
CENTRALKA STEROWANIA

## DA.24A



Libro istruzioni  
**Operating instructions**  
*Betriebsanleitung*  
**Livret d'instructions**  
**Manual de instrucciones**  
Książeczka z instrukcjami



UNIONE NAZIONALE COSTRUTTORI  
AUTOMATISMI PER CANCELLI, PORTE,  
SERRANDE ED AFFINI

**Dichiarazione CE di conformità**  
**EC declaration of conformity**  
**EG-Konformitätserklärung**

**Déclaration CE de conformité**  
**Declaracion CE de conformidad**  
**Deklaracja UE o zgodności**

Con la presente dichiariamo che il nostro prodotto  
We hereby declare that our product  
Hiermit erklaren wir, dass unser Produkt  
Nous déclarons par la présente que notre produit  
Por la presente declaramos que nuestro producto  
Niniejszym oświadczamy że nasz produkt

**DA.24A**

è conforme alle seguenti disposizioni pertinenti:  
complies with the following relevant provisions:  
folgenden einschlagigen Bestimmungen entspricht:  
correspond aux dispositions pertinentes suivantes:  
satisface las disposiciones pertinentes siguientes:  
zgodny jest z poniżej wyszczególnionymi rozporządzeniami:

Direttiva sulla compatibilità elettromagnetica (89/336/  
CCE, 93/68/CEE)  
EMC guidelines (89/336/EEC, 93/68/EEC)  
EMV-Richtlinie (89/336/EWG, 93/68/EWG)  
Directive EMV (89/336/CCE, 93/68/CEE) (Compatibilité  
électromagnétique)  
Reglamento de compatibilidad electromagnética (89/336/  
MCE, 93/68/MCE)  
Wytyczna odnośnie zdolności współdziałania elektromagne-  
tycznego (89/336/EWG, 93/68/EWG)

Norme armonizzate applicate in particolare:  
Applied harmonized standards, in particular:  
Angewendete harmonisierte Normen, insbesondere:  
Normes harmonisées utilisées, notamment:  
Normas armonizadas utilizadas particularmente:  
Normy standard najczęściej stosowane:

EN 55022, EN 61000-3-2, EN 61000-3-3, EN 50082-1

Data/Firma

Direttiva sulla bassa tensione (73/23/CEE, 93/68/CEE)  
Low voltage guidelines (73/23/EEC, 93/68/EEC)  
Tiefe Spannung Richtlinie (73/23/EWG, 93/68/EWG)  
Directive bas voltage (73/23/CEE, 93/68/CEE)  
Reglamento de bajo Voltaje (73/23/MCE, 93/68/MCE)  
Wytyczna odnośnie niskiego napięcia (73/23/EWG, 93/  
68/EWG)

Norme armonizzate applicate in particolare:  
Applied harmonized standards, in particular:  
Angewendete harmonisierte Normen, insbesondere:  
Normes harmonisées utilisées, notamment:  
Normas armonizadas utilizadas particularmente:  
Normy standard najczęściej stosowane:

EN 60204-1, EN 60335-1

Data/Firma

**BENINCA®**

Automatismi Benincà Srl  
Via Capitello, 45  
36066 Sandrigo (VI)  
ITALIA

### Switchboard DA.24A

Switchboard for two direct voltage motors 24Vdc, 240W total power to control two-wings gate.

#### Characteristics:

- Possibility of impulse by means of separated push-button with Open-Stop-Close function.
- Possibility of impulse by means of a single push-button with Open-Stop-Close-Stop function or through radio-control, by inserting a receiver in the preset connector.
- Presetting for the link of photo-devices with the function "inversion of the movement" during the closing phase and a momentary stop during the opening phase.
- Outputs for the connection of the blinker, the electro-lock and opened wing pilot.
- Possibility to insert the automatic closing function; the length of the pause is adjustable.
- Condominium function is adjustable.
- Braking device at adjustable speed with intervention controlled by limit switches. Limit switches devices are separated for the two motors, to have the independence of the wings movements.
- Device for detection of obstacles, with amperometric sensor and adjustable sensibility.
- Pedestrian function.

#### Structure

The glass-fiber basis consists of the power part, the supplies and all the connections for the clutch boards and the links.

#### Dimensions

205x135x85mm (board).

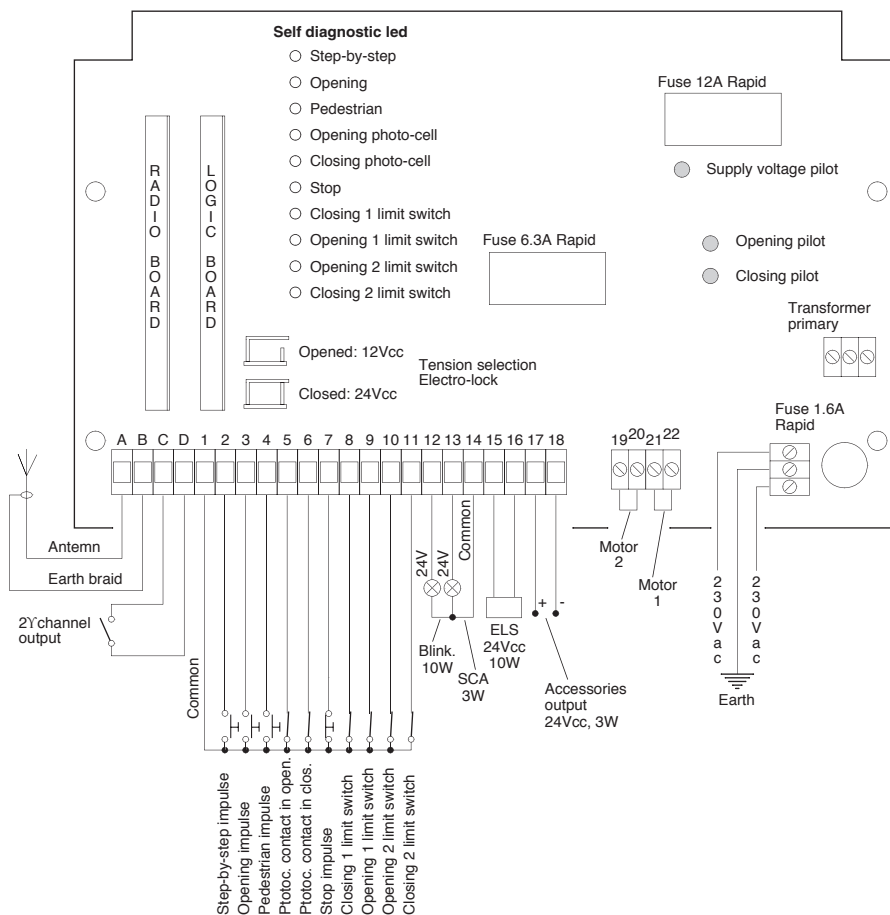
#### Power supply

- 230Vac  $\pm 10\%$ , 1.5A.

#### Protections

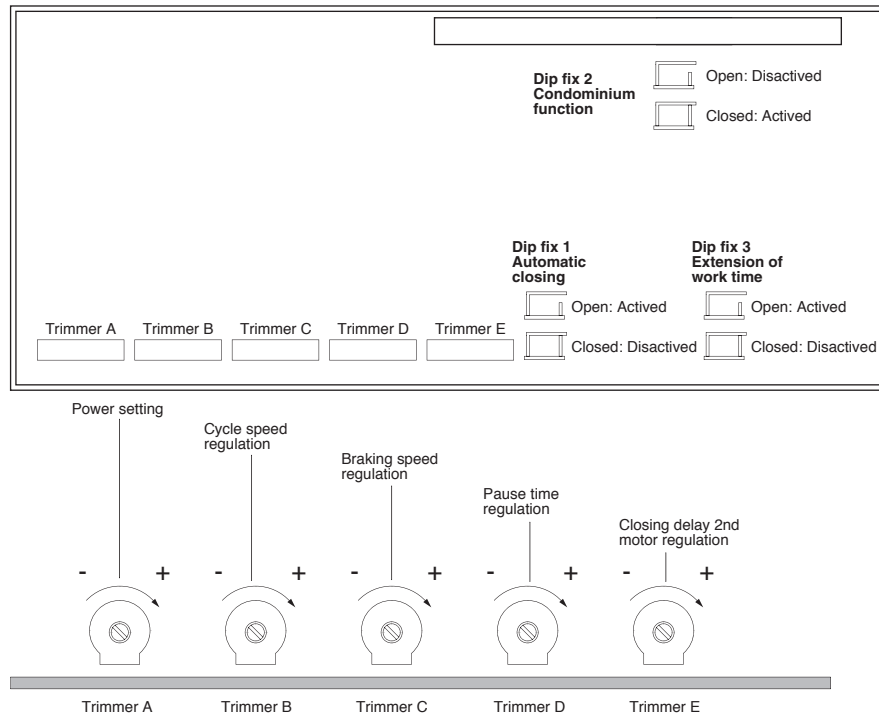
Fuse protection against the short-circuit of the general supply line;  
fuse protection against the short-circuit of the auxiliary lines;  
fuse protection against the short-circuit of the high voltage line;  
varistor protection on high and low voltage against the overvoltage;  
electronic limiters protection against the short-circuit of the motor.

## Links



- Do the links following the diagram, paying a special attention to the connections where the polarity should be observed.
- See the "Installation" paragraph for the cabling and the perfect installation of the system.

## Settings and selections



**Trimmer A:** it adjusts the intervention time of stop and electronic power limiter. By turning it counterclockwise the circuit is more sensitive (a light effort is enough to stop the movement), on the contrary, by turning it clockwise the circuit becomes less sensitive and a great effort is necessary to stop the motor. Adjust according to the standards in force.

**Trimmer B:** it adjusts the movement speed of the automation during the working cycle; by turning it counterclockwise the speed diminishes. Adjust according to the standards in force.

**Trimmer C:** it has the same function as the trimmer B as far as the braking cycle is concerned.

**Trimmer D:** it adjusts the pause length between the opening and closing when the automatic closing function is inserted. By turning it counterclockwise the time diminishes (min. 7 s); by turning it clockwise the time increases (max. 140 s).

**Trimmer E:** it adjusts the length of the closing delay of the 2nd motor; by turning it clockwise the time increases (from 1 to 10 s).

Opening delay of the 2nd motor is fix and it is of 3 s.

### Automatic closing

Opened Dip-fix 1: automatic closing function active.

Closed Dip-fix 1: automatic closing function not active.

### Condominium function

Opened Dip-fix 2: condominium function not active.

### Extension work time

Opened Dip-fix 3: max. work time 180 s.

Closed Dip-fix 3: max. work time 90 s.

## Installation

Do all links to push-buttons and photo-devices (paying attention to the supply polarity).

Jumper connect all the N.C. lines which are not used to the common (clamp n. 1).

If several couples of photo-devices are installed, contacts must be put into Series.

Through the self-diagnosis leds, check the working of the external commands, the contacts of limit switches and photo-devices.

Connect the open gate pilot, the electro-lock, the blinker and the two motors to the proper outputs.

Unused outputs must be insulated.

Place all the central unit board trimmers at mid-course.

Select the right voltage for the electro-lock.

Exclude the automatic closing for the moment.

Place the automation at mid-course manually.

Disconnect the device of manual release of the motors.

Keep the power cables away from the control cables. To avoid interference use two separate sheaths (see EN 60204-1 15.1.3).

Before any intervention on the plant disconnect the 230Vac line and the batteries.

The push the Aperture push-button: if the automation moves towards closing press the Stop push-button, disconnect the 230Vac, then invert the motors connections. Connect again the 230Vac and press the aperture push-button; adjust the cycle speed through the trimmer B, according to the standard in force and wait for the arrival to the limit switch.

Adjust the intervention of the braking circuit, by placing the cam on the limit switches and adjusting the trimmer C for an easy stop.

Press the step-by-step push-button; do the motor torque adjustment according to the standard in force through the trimmer A so that with a light effort the movement can be stopped; however it is advisable to follow the standard.

N.B.: act on the trimmers very slowly in order not to stop the automation.

Verify then the working of the securities taking care that:

- by pressing Stop in any condition, the plant stops and waits for an order;
- the intervention of the photo-devices in the closing phase, causes an immediate, complete re-aperture, while in the aperture phase it causes a momentary stop.

N.B.: any time the manoeuvres create confusion, disconnect the net for a few seconds, then give voltage again and proceed with the tests.

N.B.: if possible, avoid the extreme adjustments of the speed and power trimmers.

N.B.: connect the wing which supports the electro-lock to the clamps 21, 22 of the motor 1, in order to allow the release of the wing bolt.

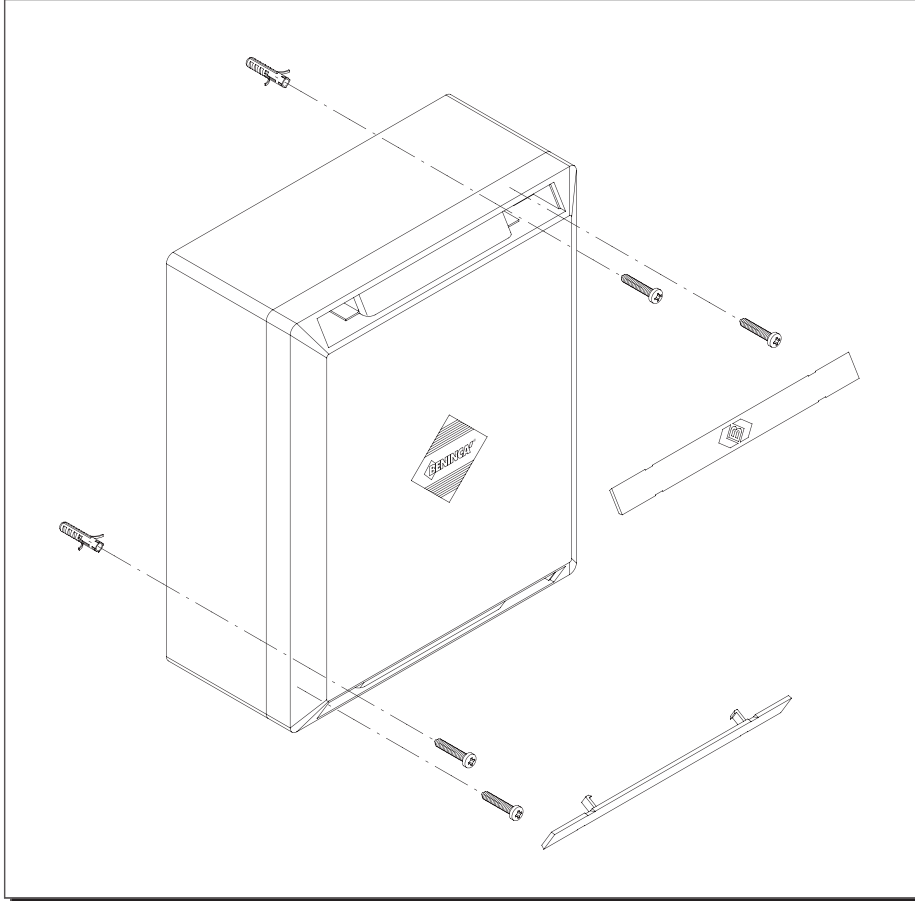
N.B.: it is important to link the two motors with cables of the same length in order to avoid speed differences between them.

N.B.: the minimum section of the motor cables should be as follows:

- 1.5mm<sup>2</sup> for lengths up to 1 m.
- 2.5mm<sup>2</sup> for lengths up to 3 m.
- 4.0mm<sup>2</sup> for lengths up to 6 m.

It is advisable to cable the two motors to the switchboard with cables of the same length and diameter.

If no limit switches are available, take care that the wings, once in contact with the mechanic stop, are not under effort but stop immediately because of the amperometric sensor; if not, increase the sensitivity of the latter by turning the trimmer A counterclockwise.



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