

L8542067  
Rev. 01/09/07

# BENINCA®

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

## **DA.24V** **CP.EVA**

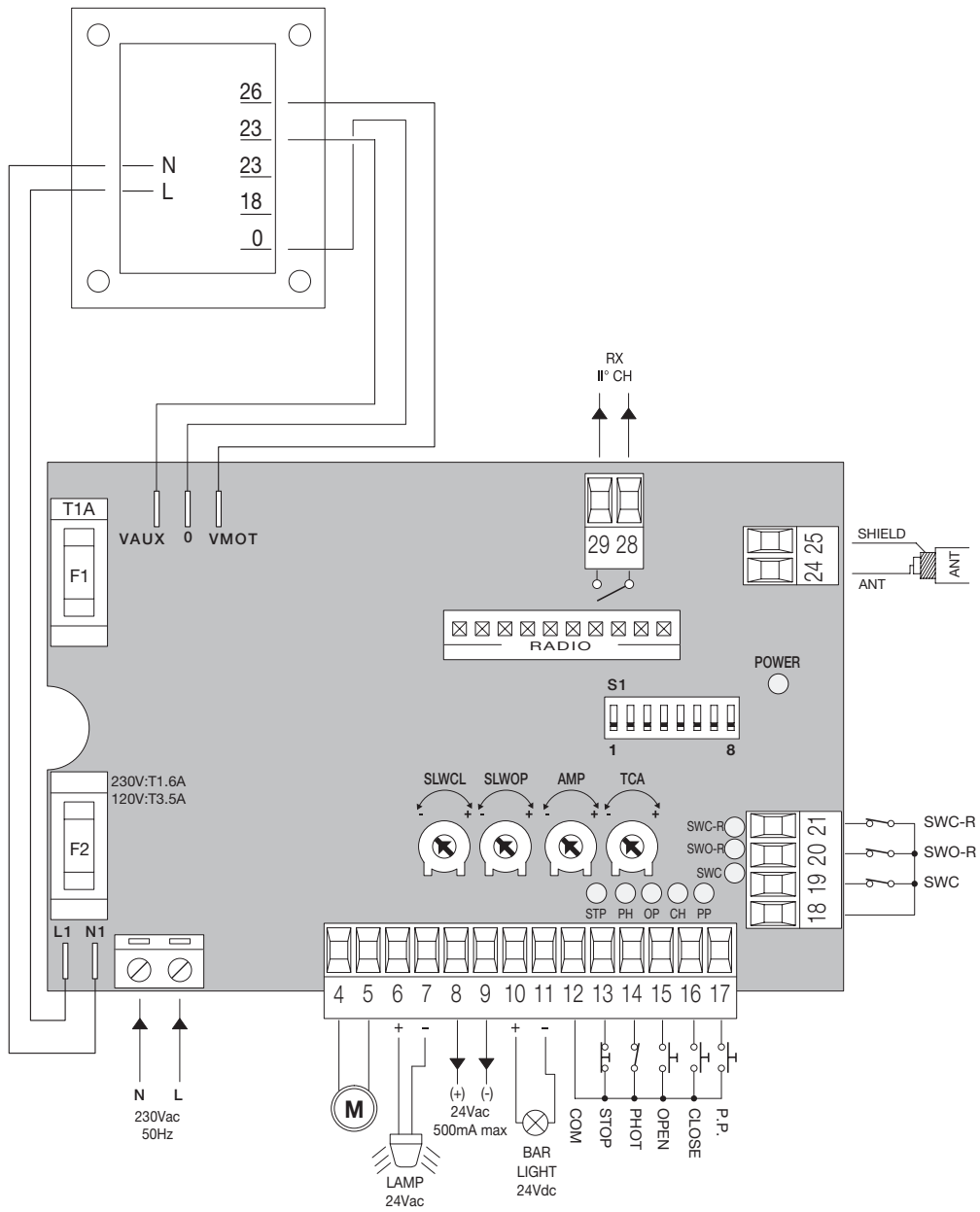
Libro istruzioni  
**Operating instructions**  
*Betriebsanleitung*  
**Livret d'instructions**  
Manual de instrucciones  
**Książeczka z instrukcjami**



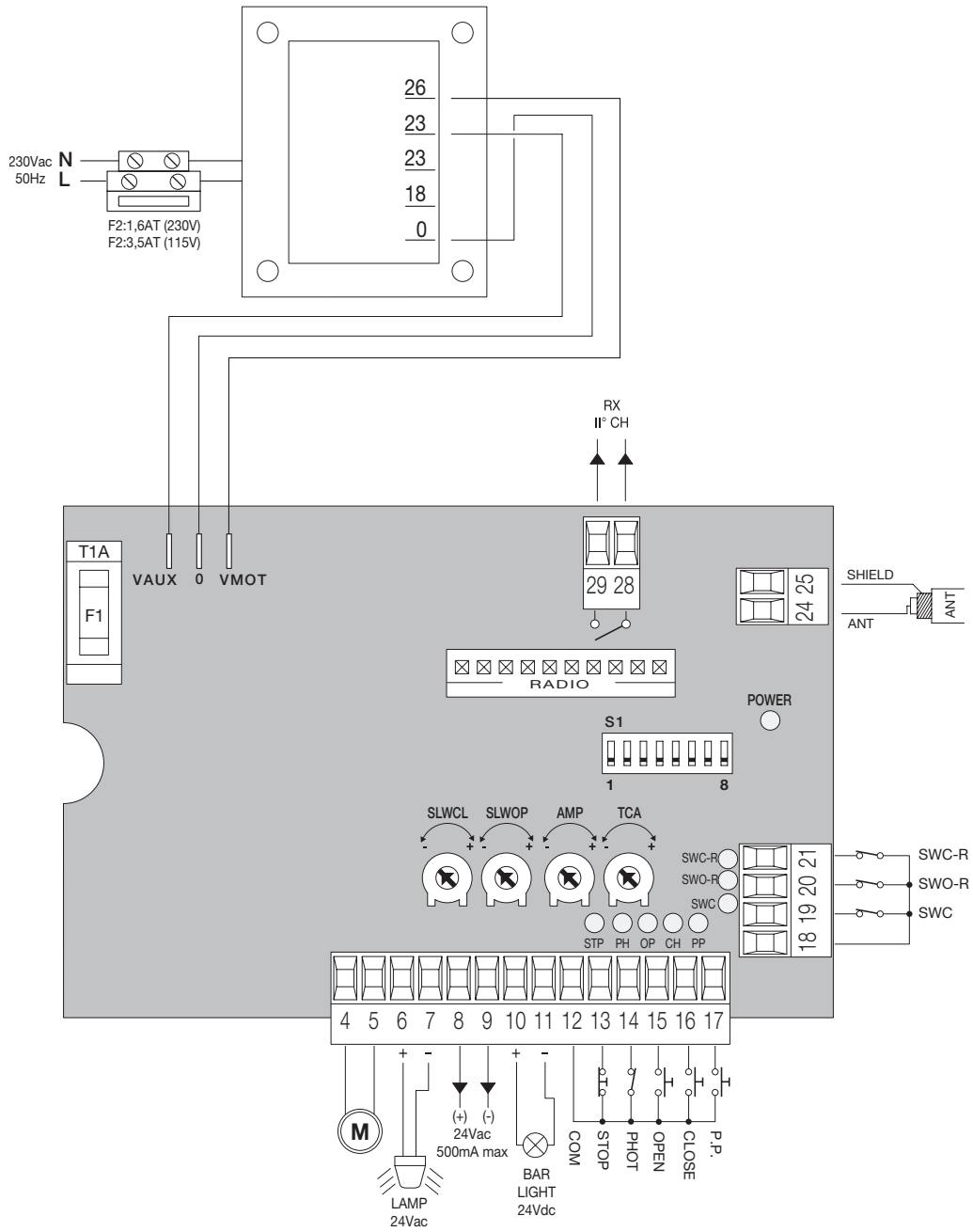
UNIONE NAZIONALE COSTRUTTORI  
AUTOMATISMI PER CANCELLI, PORTE,  
SERRANDE ED AFFINI

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# DA.24V



# CP.EVA



## DA.24V/CP.EVA Control Unit

Control unit for 24Vdc motors with power not exceeding 120W to control road barriers.

### GENERAL WARNINGS

- a) The wire connections and the operating logic should be in compliance with regulations in force.
- b) The cables featuring different voltage should be physically detached, or adequately insulated by an additional insulation of at least 1 mm.
- c) The cables should be further fastened in proximity to the terminals.
- d) Check all connections before powering the unit.
- e) Check that setting of the Dip-switches are the required ones.
- f) The Normally Closed (N.C.) contacts which are not in use should be short-circuited.

### INPUT/OUTPUT FUNCTIONS

N° of terminals	Function	Description
1-2	Power supply	Input, 230Vac 50Hz (1-Neutral/2-Phase)
4-5	Motor 24Vdc	Connection to motor, 24Vdc
6-7	Flasher	Flasher connection, 24Vac 40W max.
8-9	24 Vac	Output, accessories power supply - 24Vac/0.5A max. IMPORTANT: If the battery charger board CB.24V is installed, the output (without mains power connected) has a 24Vdc polarised voltage. Make sure the devices are correctly connected (i.e. 8:+24Vdc - 9:-24Vdc).
10-11	Road barrier lights	Connection of barrier beam lights, 24Vdc (10+/11+) -200mA max (equal to approx. 6 lights).
12	COM	Common to all control inputs.
13	STOP	Input, STOP push-button (N.C. contact)
14	PHOT	Input, safety devices connection, N.C. contact (ex. Photocells)
15	OPEN	Input, OPEN push-button (N.O. contact)
16	CLOSE	Input, CLOSE push-button (N.O. contact)
17	Step-by-Step	Input, step-by-step push-button (N.O. contact)
18	COM	Common, limit switches.
19	SWC	Input, CLOSURE limit switch (N.C. contact). When this contact is opened, power supply to the motor is cut-off at the end of the road barrier closing operation.
20	SWO-R	Input, braking limit switch in the opening phase (N.C. contact). When this contact is opened, braking starts during the barrier opening phase.
21	SWC-R	Input, braking limit switch in the closing phase (N.C. contact). When this contact is opened, braking starts during the barrier closing phase.
24-25	Antenna	Connection of the antenna radio receiver removable board (24-signal/25-screen).
28-29	Radio 2 <sup>nd</sup> Ch	Output, N.O. contact of the second radio channel.
VAUX-0-VMOT	Secondary	Connection of the transformer secondary winding
L1-N1	Primary	Connection of the transformer primary winding
J3	Radio receiver	Removable connector for radio receiver.

#### Trimmer functions

<b>SLOWCL</b>	The motor speed during braking in the closing phase is adjusted by this trimmer. Braking starts with the triggering of the SWC-R limit switch and ends when the SWC limit switch is activated.
<b>SLOWOP</b>	The motor speed during braking in the opening phase is adjusted by this trimmer. Braking starts with the triggering of the SWO-R limit switch and ends when the time preset with Dip-Switch N°8 has elapsed.
<b>AMP</b>	The obstacle detection amperometric sensor sensitivity is adjusted by this trimmer. The sensor is activated in both opening and closing phases. It is not activated during braking in the opening phase. Should an obstacle be detected: In the opening phase, the road barrier movement is stopped. In the closing phase, the barrier is stopped and then re-opened completely.
<b>TCA</b>	This trimmer allows the adjustment of the automatic closure time if activated by Dip-Switch No. 1. The adjustment ranges between 1s minimum and 90s maximum

#### Dip-Switch functions

<b>DIP 1 "TCA"</b>	The automatic closure is enabled or disabled Off: disabled automatic closure On: enabled automatic closure
<b>DIP 2 "PRELAM."</b>	Forewarning flashing light is enabled or disabled Off: disabled forewarning flashing light On: enabled forewarning flashing light. The flashing light is activated 3s before the starting of the motor.
<b>DIP 3 "SCL"</b>	(DIP 1 must be ON) This enables or disables the rapid closure function after the photocell activation. Off: Disabled function. After the activation of the photocell, the automatic closure time remains unchanged. On: Enabled rapid closure function. After activation of the photocell, the automatic closure time is reduced by 1 second.
<b>DIP 4 "P.P. Mod"</b>	The operating mode of the "P.P. (Step-by-Step) Push button" and of the transmitter are selected. Off: Operation: OPEN > STOP > CLOSE > STOP > On: Operation : OPEN > CLOSE > OPEN >
<b>DIP 5 "LIGHT"</b>	The operating mode of the road barrier lights connected to terminals 10/11 is selected. Off: Slow flashing with open or closed road barrier. Fast flashing during operation. On: Steady light on with open barrier. To be used as open barrier warning light or for connection to 24Vdc devices for vehicle counting.
<b>DIP 6 "COND."</b>	The multi-flat function is enabled or disabled. Off: disabled multi-flat function. On: enabled multi-flat function. The P.P. (Step-by-step) impulse or the impulse of the transmitter have no effect in the opening phase and during TCA phase (if activated).
<b>DIP 7 "AMPCL"</b>	The amperometric sensor is enabled or disabled during braking in the closing phase. Off: Enabled amperometric sensor during braking in the closing phase On: Disabled amperometric sensor during braking in the closing phase..
<b>DIP 8 "Trall-OP"</b>	The duration in seconds of braking in the opening phase is selected. Select time according to the speed of the road barrier beam and the triggering point of the braking limit switch in the opening phase Off: 4s braking On: 2s braking

*If required, the system can be controlled in SERVICE MAN mode by switching all Dip Switched to ON*

**To adjust the road barrier speed**

**WARNING! This adjustment affects the safety level of the automatic system.  
Check that the force applied to the road barrier beam complies with regulations in force.  
Any change in speed requires a new calibration of the amperometric sensor.**

A Faston (VMOT) connector is provided on the power supply transformer. This allows for the adjustment of the road barrier motor speed at three different levels (18-23-26).

By positioning the Faston (VMOT) to 18 a lesser speed is provided, by moving the Faston to 26 a higher speed is provided.

Should the VE.AM mobile stand or the VE.RAST rack be present, reduce the beam speed.

**Diagnostics of LEDs**

The control unit is provided with a series of self-diagnostic LEDs which permit to check all functions:

<b>POWER LED</b>	It flashes to indicate the presence of mains power supply
<b>STOP LED</b>	It switches off when the STOP button is activated
<b>PHOT LED</b>	It switches off when the photocells are not aligned or in the presence of obstacles
<b>OPN LED</b>	It switches on when the OPEN button is activated
<b>CLS LED</b>	It switches on when the CLOSE button is activated
<b>PP LED</b>	It switches on when the PP button is activated
<b>SWC LED</b>	It switches off when the SWC closing limit switch is activated
<b>SWO-R LED</b>	It switches off when the SWO-R opening braking limit switch is activated
<b>SWC-R LED</b>	It switches off when the SWC-R closing braking limit switch is activated