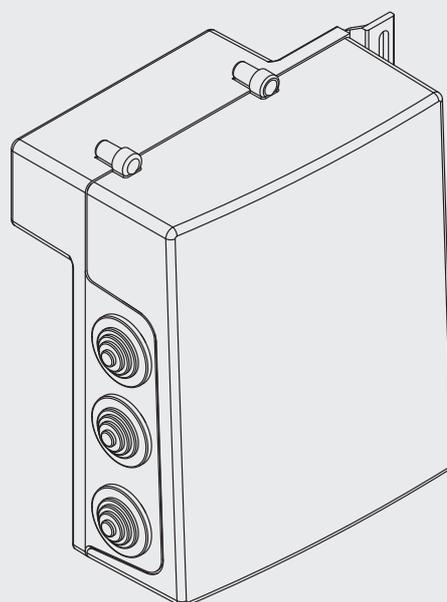
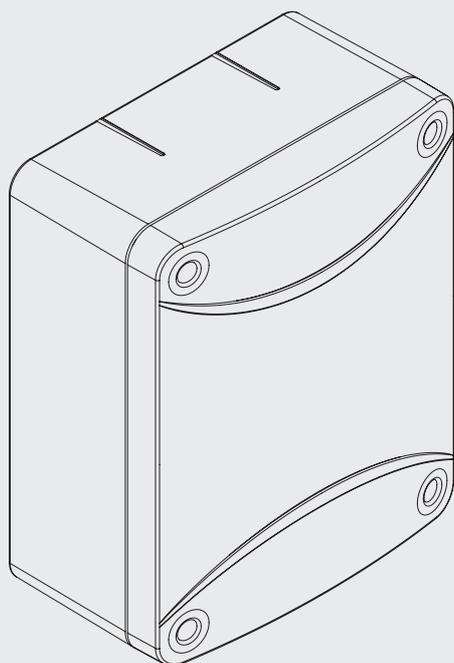
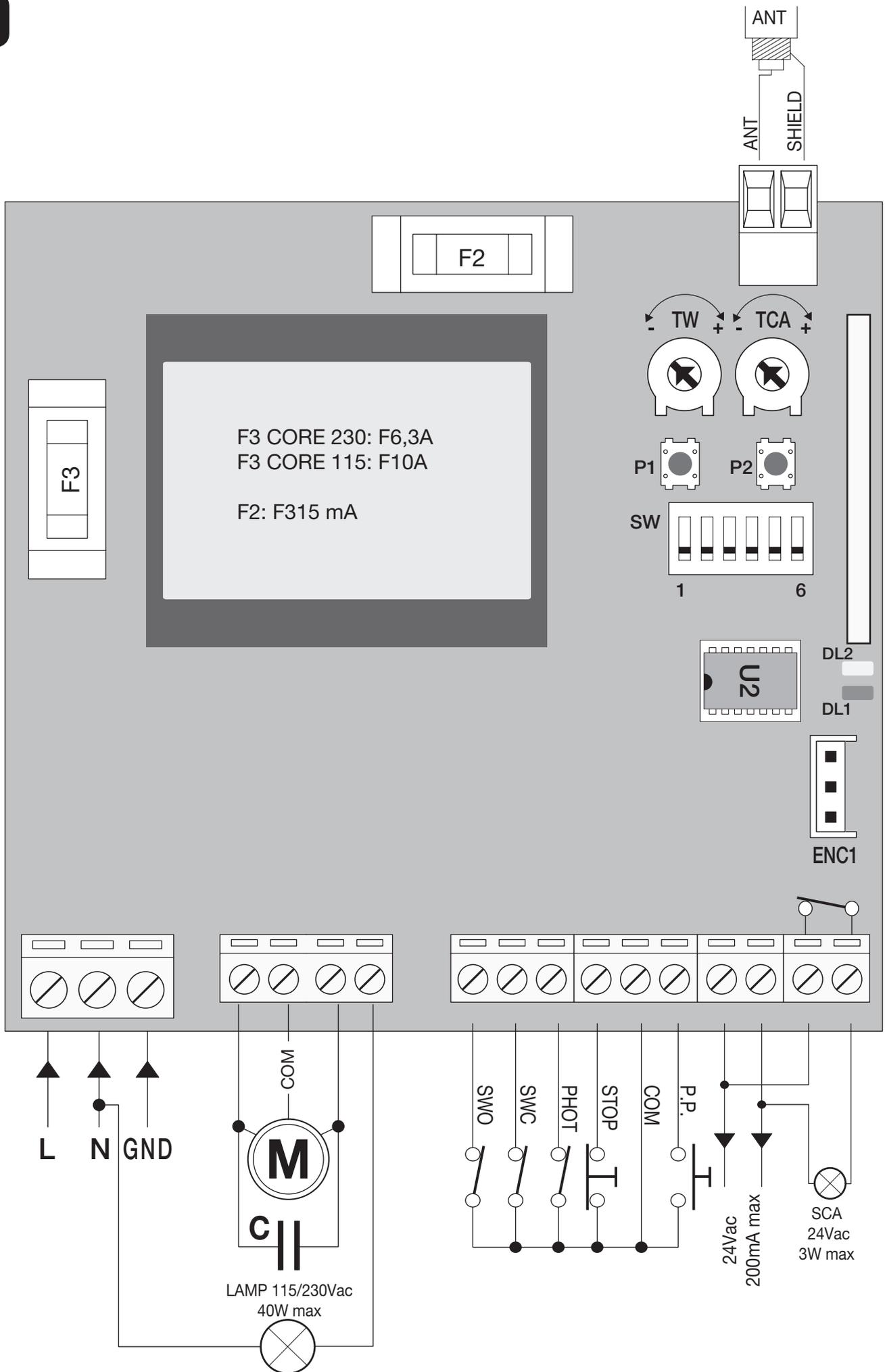


# CORE



**BENINCA**<sup>®</sup>  
TECHNOLOGY TO OPEN



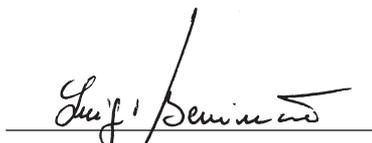


## EC declaration of conformity

Manufacturer: Automatismi Benincà SpA.  
Address: Via Capitello, 45 - 36066 Sandrigo (VI) - Italia

Herewith declares that: control unit **CORE**.  
complies with the following relevant provisions:  
EMC guidelines: 89/336/CCE, 93/68/CEE  
Low voltage guidelines: 73/23/CEE, 93/68/CEE

Benincà Luigi, Legal responsible.  
Sandrigo, 10/11/2011.



### WARNINGS

This manual has been especially written to be use by qualified fitters.

None of the information provide in this manual can be considered as being of interest for the end users.

Preserve this manual for future needs.

The technician has to furnish all the information related to the step by step function, the manual and the emergency function of the operator, and to deliver the manual to the final user.



Foresee on the supply net an onnipolar switch or selector with distance of the contacts equal or superior to 3 mms.

Verify that of the electrical system there is an awry differential interrupter and overcurrent protection.

Some typologies of installation require the connection of the shutter to be link at a conductive mass of the ground according to the regulations in force.

The electrical installation and the operating logic must comply

with the regulations in force.

The leads fed with different voltages must be physically separate, or they must be suitably insulated with additional insulation of at least 1 mm.

The leads must be secured with an additional fixture near the terminals.

During installation, maintenance and repair, interrupt the power supply before opening the lid to access the electrical parts

Check all the connections again before switching on the power.

The unused N.C. inputs must be bridged.

The descriptions and the present illustrations in this manual are not binding. Leaving the essential characteristics of the product unchanged, the manufacturer reserves himself the right to bring any change of technical, constructive or commercial character without undertaking himself to update the present publication.

### SPECIFICATIONS

Mains power supply	230 VAC 50/60 Hz (115 VAC 50/60Hz CORE 115)
Output, Motor	1 motor, 230 VAC (115VAC CORE 115)
Motor maximum power	750 W
Output, power supply of accessories	24VDC 200mA max.
Protection level	Version in LB box: IP55 – BULL version: IP30
Operating temperature	-20°C / +70°C
Radio receiver	433.92 MHz, incorporated and configurable (rolling-code or fixed+rolling-code+ ARC Advanced Rolling Code)
No. of codes storable in memory	64

# CONTROL PANEL CORE

## WIRE DIAGRAM

Wire connections shown in Fig. 1 are described hereunder:

Terminals	Function	Description
L-N-GND	Power supply	Input, 230VAC 50Hz (CORE) Input, 115VAC 50/60Hz (CORE 115V) (1-Phase/2-Neutral/GND-Ground connection)
MOT-COM-MOT	Motor	Connection to motor: (MOT-move/COM-Common/MOT-move)
N-BLINK	LAMP	Output, connection to Flashing light CORE: 230 Vac 40W max. CORE 115V: 115 Vac 40W max.
SWO	SWO	Input, OPENING limit switch (Normally Closed contact)
SWC	SWC	Input, CLOSING limit switch (Normally Closed contact)
PHOT (CLOSE)	PHOT	Input, connection to safety devices, Normally Closed (N.C.) contact (e.g. photocells): configurable through DIP3). In "Service man" mode, it activates the CLOSE function. In this case connect a Normally Open (N.O.) key.
STOP	STOP	Input, STOP key (N.C. contact)
COM	COM	Common, all control inputs.
P.P. (OPEN)	Step-by-Step	Input, step-by-step key (N.O. contact). In "Service man" mode, it activates the OPEN control function.
24 VAC	24Vac	Output, 24Vac/200mA max accessory power supply.
SCA	SCA	Contact free from voltage, not insulated for the connection of open gate indicator lamp. Open contact with closed door leaf. Flashing light during the door leaf movement. With open door leaf, the contact is closed.
ENC1	ENCODER	Input, connection of the encoder. See section HOW TO ADJUST BRAKING
SHIELD-ANT	Antenna	Connection of the antenna to the incorporated radio-receiver module (SHIELD-screen/ANT-signal).

### Note:

The control unit uses a "P2" key with the same functions of the Step-by-Step push-button. This is useful to control the automatic system during installation (only with DIP2: OFF).

### CHECKING CONNECTIONS:

- 1) Cut off power supply.
- 2) Manually release the door, move it at around half stroke and lock it again.
- 3) Reset power supply.
- 4) Send the step-by-step (P.P.) control signal through the P2 key, P.P. or remote control.
- 5) The door leaves should open. If not, with stopped motor, it is sufficient to invert the move wires of the motor (MOT/MOT) of the motor and the limit switches (SWO/SWC).
- 6) Adjust Times and operating Logics.

## TRIMMER FUNCTIONS

**TW** It allows the maximum duration of opening and closing.  
It must be preset approx. 4s more with respect to the actual stroke time of the system.  
The adjustment ranges from 3s to 180s maximum.

**If installed, the Encoder provides the function of anti-crash sensitivity adjustment.**

**TCA** It allows to adjust the automatic closure time.  
The adjustment ranges from 3s to 180s maximum.  
With TCA trimmer completely turned clockwise, the DL2 LED (green) switches off, TCA is deactivated.

## DIP-SWITCH FUNCTION

Dip-Switches	Function	Description
DIP1	Set-up	To be used only for the setting-up of the torque and the forewarning and braking time. After moving DIP1 to ON: - with P1 push-button the torque is adjusted. - with push-button P2 the forewarning light is activated/deactivated. - with the Step-by-Step input or a memorised remote control, braking length is adjusted (with Encoder only). See the related sections. After presetting the parameters, move to OFF.
DIP2	Multi-flat	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.
DIP3	PHOT: operating mode	The operating mode of the PHOT input is selected Off: Input, activated in both opening and closing phases On: Input, activated in the closing phase only
DIP4	P.P.: operating mode	The operating mode of the "P.P. push-button" and the transmitter are selected. Off: Operation: OPEN > STOP > CLOSE > STOP > On: Operation: OPEN > CLOSE > OPEN >
DIP5	Rapid closure	The rapid closure is enabled or disabled with (only with activated TCA) Off: disabled rapid closure On: enabled rapid closure. The triggering of the photocell involves, after approx. 3s, the closure of the door.
DIP6	Radio	The programmable code transmitters are enabled or disabled. On: Radio receiver is enabled for roll-on code transmitters only. Off: Receiver is enabled for both roll-on and programmable code transmitters.

## HOW TO ADJUST BRAING (WITH ENCODER ONLY)

To adjust braking length in both opening and closing phases, proceed as follows:

- 1) Close the gate (make sure that the closing limit switch is pressed).
- 2) Move DIP 1 to ON
- 3) Send PP control signal (through Step-by-Step Input or memorised remote control). The gate starts opening at normal speed.

- 4) When the gate reaches the desired braking point, send another PP control signal, the gate will start braking until it is completely opened. Subsequent PP control signals will be ignored.
- 5) With totally open and stopped gate, send a PP control signal (through Step-by-Step Input or memorised remote control) The gate starts closing at normal speed.
- 6) When the gate reaches the desired braking point, send another PP control signal, the gate will start braking until it is completely closed. Subsequent PP control signals will be ignored.
- 7) Move DIP1 to OFF again.

**NOTE:**

- if braking length does not require any adjustment in both opening and closing, leave the gate to totally open/close without sending a PP control signal to start braking.
- If safety functions (STOP and PHOT) are activated, the adjustment procedure will be blocked.
- During this phase, the anti-crash sensor is disabled.
- When the Encoder is installed, Trimmer TW provides the function of sensitivity adjustment of the Encoder.

**ADJUSTMENT OF THE TORQUE (DIP1:ON)**

When DIP1 is moved to ON, the board indicates that the torque has been applied during a number of flashes (from 1 to 4) of the DL2 green LED, followed by a 3-s interval.

The max torque is indicated with DL2 green LED with fixed light.

To increase the torque, press P1. The DL2 LED changes the number of flashes to indicate the selected torque value.

Once the desired torque is selected, move DIP 1 to OFF to memorise this presetting.

**PRE-WARNING ACTIVATION/DEACTIVATION (DIP1:ON)**

As soon as DIP1 is to ON, the DL1 red LED indicates whether the pre-warning flashing is activated.

The pre-warning function can be activated or deactivated with P2 key.

LED DL1 On: Activated pre-warning, the indicator lamp switches on for approx. 3 seconds before the motor starts.

LED DL1 Off. Pre-warning is deactivated.

**SERVICE MAN MODE**

With all DIPs on ON, the control unit switches to SERVICE MAN mode.

The PHOT input has the CLOSE push-button function (connect the button with N.O. contact).

The PP input has the OPEN push-button function (connect the button with N.O. contact).

The OPEN/CLOSE push-buttons must be kept pressed during operation. The opening of the STOP input stops the motor.

The contemporary pressure of OPEN/CLOSE stops the motor.

**RADIO SELF-LEARNING (DIP1:OFF)**

The CORE control unit is equipped with a built-in radio module for the fixed or roll-on code of remote controls, with 433.92MHz frequency.

To use a remote control, it is first necessary to store its code in memory. The memorisation procedure is described hereunder. The device is able to store up to 64 different codes in memory.

By pressing P1, the control unit enters the radio learning phase: DL1 red LED flashes 1 time per second, awaiting the key to be matched to the Step-by-Step function;

When the key is stored in memory, exit from the programming mode;

By pressing P1 twice, the DL1 red LED flashes 2 times per second and the pedestrian learning phase is entered (the pedestrian function controls an opening operation of 7s).

When the key to be matched is memorised, exit from the programming mode.

If the programming mode must be left without storing any remote control signal, press P1 key until DL1 red LED starts to flash in "power on" mode (see LED diagnostics on page 7).

To reset the memory of the receiver, press and keep P1 and P2 keys pressed for around 10 seconds (during this period of time, both DL1 and DL2 flash rapidly).

After 10 seconds, when the two LEDs are switched on with fixed light, release the push-buttons.

When the LEDs switch back again to the original configuration, the control unit has completed the memory

reset.

**NOTE:**

The transmitters are memorised on an EPROM memory (U2), which can be extracted from the control unit and inserted in a new CORE control unit should a replacement is required.

For safety reasons, the transmitters can be stored in memory during the opening/closing of the motor.

**TRANSMITTER REMOTE LEARNING**

If the transmitter code is already stored in the receiver, the remote radio learning can be carried out (without accessing the control unit).

**IMPORTANT: The procedure should be carried out with gate in the opening phase, during the TCA dwell time.**

Proceed as follows:

- 1 Press the hidden key of the transmitter, the code of which has already been stored in memory.
- 2 Within 5 seconds, press the already memorised transmitter key corresponding to the channel to be matched to the new transmitter. The flashing light switches on.
- 3 Within 10 seconds, press the hidden key of the new transmitter.
- 4 Within 5 seconds, press the key of the new transmitter to be matched to the channel selected at item 2. The flashing light switches off.
- 5 The receiver stores the new transmitter code and exits from the programming mode immediately.

**LED DIAGNOSTICS**

The red LED DL1 indicates the activation of inputs according to the legend hereunder:

STOP	on with fixed light
PHOT	rapid flashing
SWO	1 flash with 2-second interval
SWC	2 flashes with 2-second interval
OPEN+CLOSE	3 flashes with 2-second interval

By flashing slowly, the red LED DL1 also indicates that the unit is powered.

The green LED DL2 indicates the movement direction of the motor and the status of the gate according to the legend hereunder:

APERTURA	1 flash with 1-second interval
CHIUSURA	2 flashes with 1-second interval
Open gate without TCA	on with fixed light
Open gate with TCA	rapid flash
Closed gate	LED off

**WASTE DISPOSAL**

If the product must be dismantled, it must be disposed according to regulations in force regarding the differentiated waste disposal and the recycling of components (metals, plastics, electric cables, etc.). For this operation it is advisable to call your installer or a specialised company.