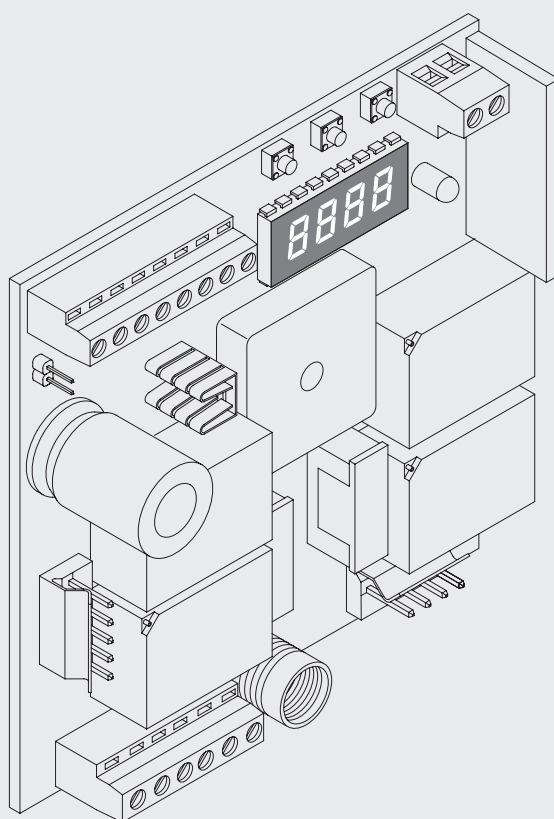
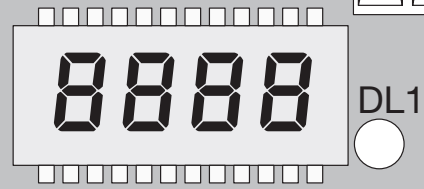
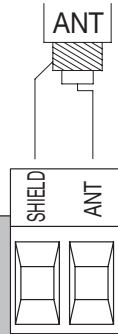
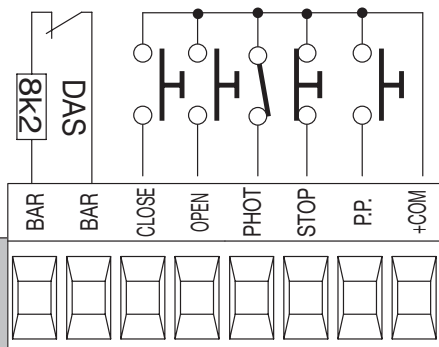
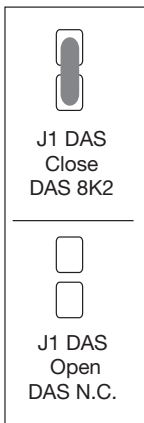


# CP.J4 PRO

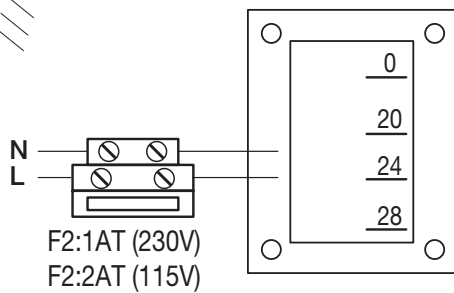
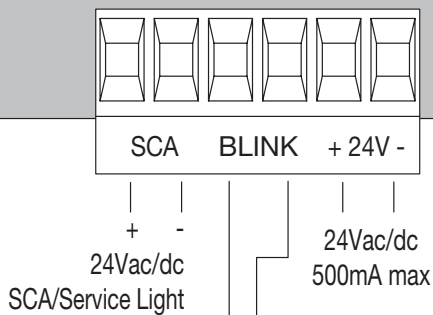
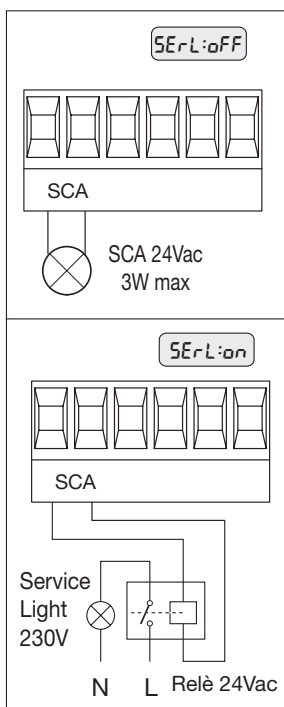
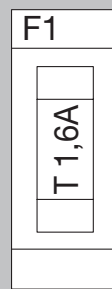
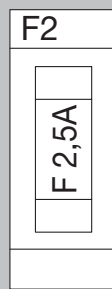
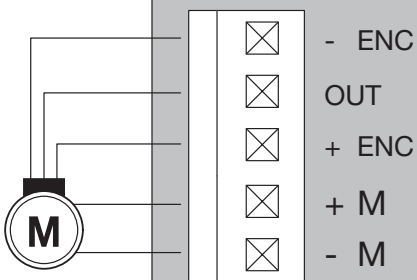


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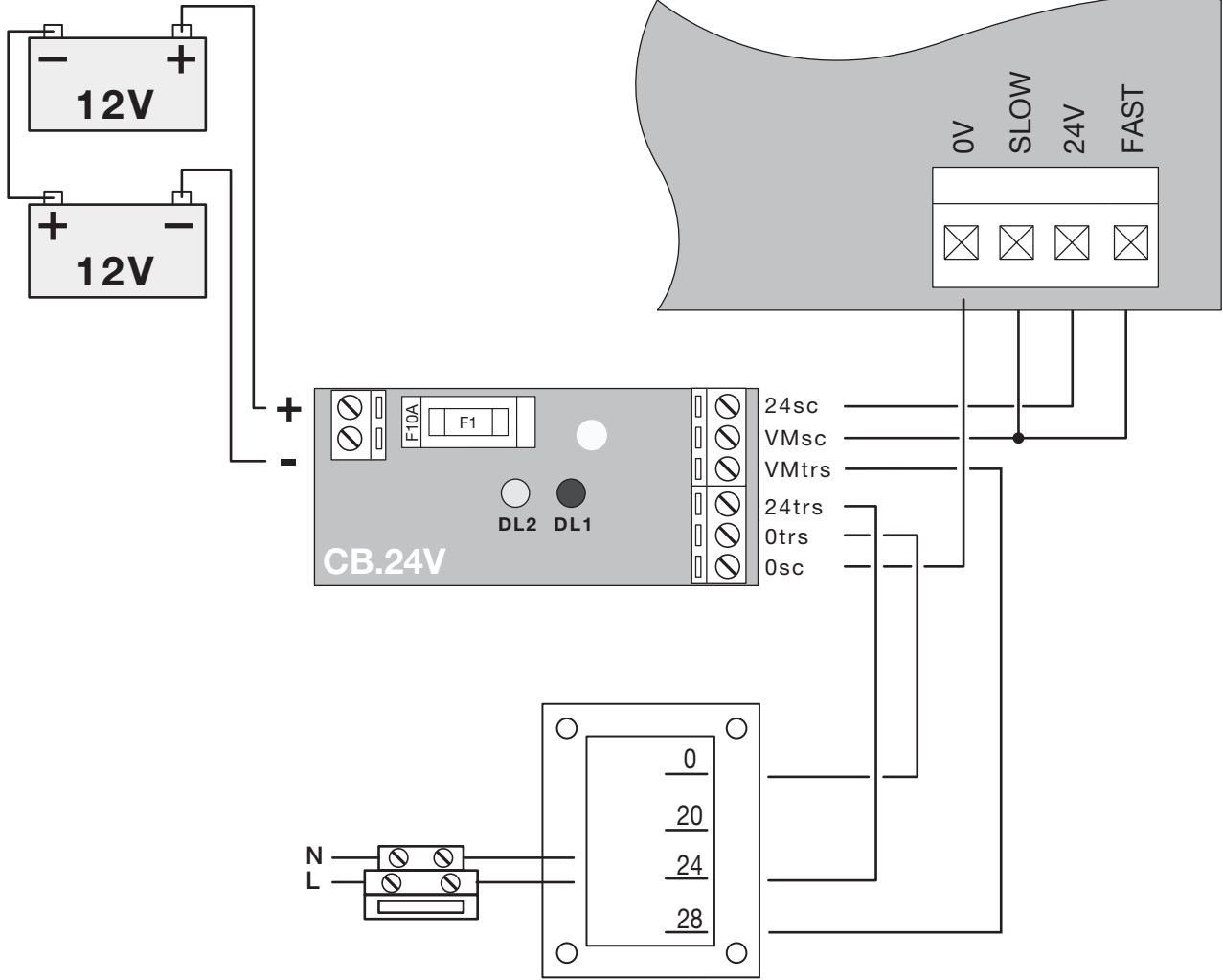




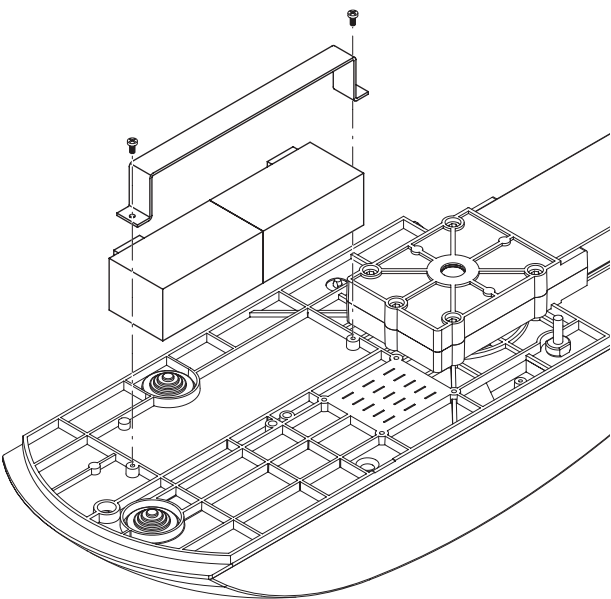
RADIO



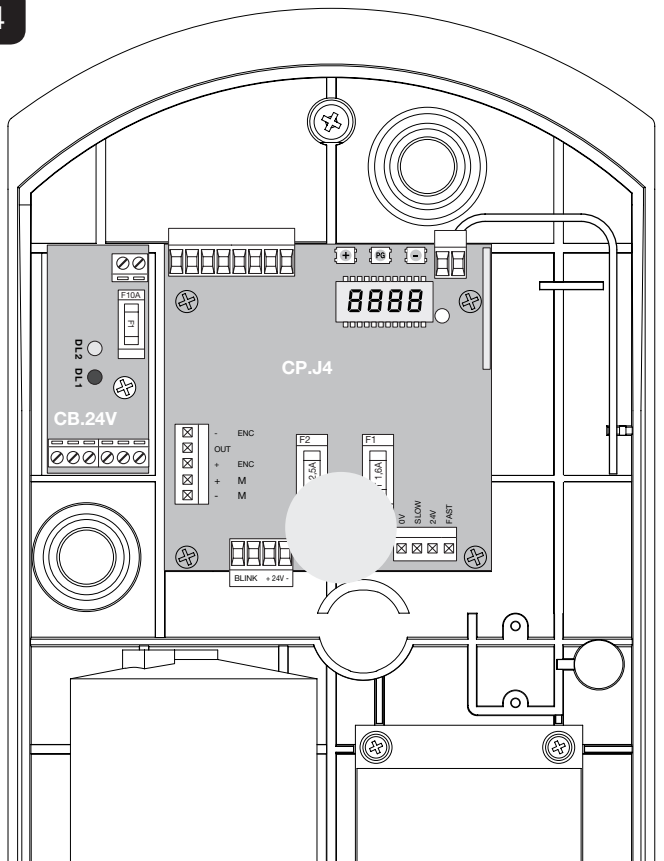
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3



4

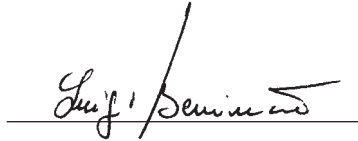


## EC declaration of conformity

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

Herewith declares that: control unit **CP,J4 PRO.**  
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, 08/04/2008.



## 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.

## TECHNICAL DATA

Contol unit power supply	24 Vdc
Power supply	230 Vac 50/60 Hz or 115Vac 50/60Hz according to the version
Output	1 motor 24Vdc
Motor maximum power	220 W
Accessories power supply	24Vdc 500mA max.
Protection level	IP40
Operating temp.	-20°C / +70°C
Radio receiver	built in 433,92 MHz configurabile (rolling-code or programmable + rolling-code)
Memory capacity	64 rolling-code transmitters

# CONTROL PANEL CP.J4

## WIRE DIAGRAM

Wire connections shown in Fig. 1 are described hereunder:

Terminals	Function	Description
M+/M-/ +ENC/OUT/ -ENC	Motor	Encoder and motor plug
BAR/BAR	SAFETY EDGE	Input, sensitive safety edge 8K2 resistive safety edge: "DAS" contacts closed (weld between contacts) Mechanical edge : "DAS" contacts open (default) When the safety edge is activated, the gate leaf stops and movement is reversed for about 3s.
CLOSE	CLOSE	Input, CLOSE push-button (Normally Open contact).
OPEN	OPEN	Input, OPEN push-button (Normally Open contact).
PHOT	Photocell	Input, photocell is activated in the closing phase. It can be configurable with PH C logics.
STOP	STOP	STOP button input (N.C. contact)
P.P.	Step by step	STEP BY STEP input ( N.O. contact)
+COM	COMMON	Common for all control inputs.
SHIELD/ ANT	antenna	Connection antenna to the built-in receiver SHIELD: Screen / ANT: Signal
FAST 24V SLOW 0V	Secondary Transformer	Secondary winding of the transformer. FAST: Motor normal speed 24V: 23V output SLOW: 15V slow down speed 0V: 0V output
+ 24V -	24 Vac/dcs	Accessories power supply 24Vac/0,5A max. Warning: With the backup battery card CB.24V, the output (without mains) is 24Vdc (polarized). Check devices connection polarity.
BLINK	Flashing	Connection to flashing light 24Vdc 15W max.
SCA	SCA or Service light	24VAC/DC output, configurable as SCA (open gate light) or timed Service light (see SERL Logics). During the operation with buffer battery, it features a polarised 24VDC voltage.

## PROGRAMMING

The programming of the various functions of the control unit is carried out using the LCD display on the control unit and setting the desired values in the programming menus described below.

The parameters menu allows you to assign a numerical value to a function, in the same way as a regulating trimmer.

The logic menu allows you to activate or deactivate a function, in the same way as setting a dip-switch.

Other special functions follow the parameters and logic menus and may vary depending on the type of control unit or the software release.

### USE OF PROGRAMMING KEYS

Press <PG> key to gain access to the Main Menu (PAR>>LOG>>RADIO>>...). These keys can be selected by pressing + and - keys.

Select the Main menu with <PG> key to enter the desired Function Menu .

- If <+> is pressed, the Function Menu can be scrolled from top to bottom.
- If <-> is pressed, the Function Menu can be scrolled from bottom to top.
- If <PG> key is pressed, presetting to be modified can be entered.
- The preset values can be modified by using <+> and <-> keys.
- The value is programmed if <PG> key is pressed again. The word "PRG" appears on the display.

See paragraph "Programming Example"..

### NOTES:

Simultaneously pressing <+> and <-> from inside a function menu allows you to return to the previous menu without making any changes.

Hold down the <+> key or the <-> key to accelerate the increase/decrease of the values.  
 After waiting 30s the control unit quits programming mode and switches off the display.  
 Pressing <-> with the display turned off means an impulse of P.P.

## PARAMETERS, LOGIC AND SPECIAL FUNCTIONS

In the charts following the single available functions are described in the plant.

	MENU	FUNCTION	MIN-MAX-(Default)	MEMO
PARAMETERS	$t_{cA}$	Automatic closure time. It is enabled only with "TCA"=ON logic. At the end of the preset time, the control unit controls a closure operation.	1-240-(40s)	
	$SA_{Ir}$	If it is memorized with the SAIR radio function, the partial opening width is adjusted through the second channel of the transmitter. The TCA automatic closure has no effect on the partial opening. Partial opening is allowed only if the door is completely closed The value is expressed in centimetres.	3-250-(5)	
	$Pn_o$	Adjustment of amperometric sensor sensitivity during normal speed in opening* 1: maximum sensibility - 99: minimum sensibility	1-99-(20%)	
	$Pn_c$	Adjustment of amperometric sensor sensitivity during normal speed in closing* 1: maximum sensibility - 99: minim sensibility	1-99-(20%)	
	$PS_o$	Adjustment of amperometric sensor sensitivity during slowing down in opening* 1: maximum sensibility - 99: minim sensibility	1-99-(20%)	
	$PS_c$	Adjustment of amperometric sensor sensitivity during slowing down in closing* 1: maximum sensibility - 99: minim sensibility	1-99-(20%)	
	$t_{LS}$	It is activated only with SERL:ON logics. The activation time of the service light is adjusted.	1-240-(60s)	
	$SP_{In}$	It regulates the tension belt release when the operator arrives to the mechanical stop in closing	0-20-(3)	
	$t_{TRMF}$	The belt tensioning time is adjusted when the automatic system reaches the stop in the closed position. It is activated only through the SPIN:0 parameter. Note: use the TRMF parameter if an optimal tensioning of the belt is not obtained through the SPIN parameter.	0-120 (30)	

**\* ATTENTION:**

**A wrong formulation of these parameters can be dangerous.  
 Respect the regulations in force!**

	MENU	FUNCTION	DEFAULT	MEMO
LOGICS	$t_{cA}$	Enables or disables automatic closing On: automatic closing enabled Off: automatic closing disabled	(OFF)	
	$ibL$	Enables or disables multi-flat function. On: multi-flat function enabled. The step-by-step and pedestrian commands have no effect during the opening phase. Off: multi-flat function disabled.	(OFF)	
	$ibcA$	During the TCA phase, the PP controls are enabled or disabled. On: PP controls are disabled. Off: PP controls are enabled.	(OFF)	
	$ScL$	The rapid closure is enabled or disabled. It can be activated only if TCA:ON On: enabled rapid closure. With open gate, the photocell activation causes the automatic closure after 3 s. If the photocell is activated during the opening phase, the operation is completed and closure starts after 3s Off: disabled rapid closure.	(OFF)	

<b>LOGICS</b>	<b>PP</b>	The operating mode of “P.P. Push button” and of the transmitter are selected. On: Operation : OPEN > CLOSE > OPEN > Off: Operation: OPEN > STOP > CLOSE > STOP >	(OFF)	
	<b>PrE</b>	Forewarning flashing light enabled or disabled. On: enabled forewarning flashing light. The flashing light is activated 3 s before the starting of the motor. Off: disabled forewarning flashing light.	(OFF)	
	<b>htr</b>	The Service Man function is enabled or disabled. On: Service Man operation. The OPEN and CLOSE push-buttons should be kept pressed during the entire operation. PP input and transmitters are disabled. Off: Automatic operation.	(OFF)	
	<b>Ltcr</b>	During the TCA time, the blinker is enabled or disabled. On: Enables blinker. Off: Disables blinker.	(OFF)	
	<b>cLoc</b>	The OPEN Input mode is selected On: OPEN Input, with WATCH function. To be used to connect the timer for timed opening/closing. (CLOSED contact-open gate, Open contact, normal operation). Off: OPEN Input, with OPEN function	(OFF)	
	<b>cuAr</b>	The code programmable transmitters is enabled or disabled. On: Radio receiver enabled only for rolling-code transmitters. Off: Receiver enabled for rolling-code and programmable code transmitters (self-learning and Dip Switch).	(OFF)	
	<b>SErL</b>	The service light function is enabled or disabled on the SCA output. On: The output is provided with service light function. At each operation, the output supplies 24Vac for the time preset with TLS parameter. TLS time count starts with motor stop. Use an auxiliary relay to control the light. Off: The output is provided with SCA function, open gate light: switched off light with closed gate, flashing light with moving gate, switched on light with open gate. See wire diagram.	(ON)	
	<b>trEL</b>	Check of OPEN and CLOSE relays is enabled or. On: Check enabled: if one of the 2 relays is faulty, the motor does not start and the error message “ERR2” is displayed. Off: no check to relays is carried out.	(OFF)	
	<b>Soft</b>	Soft start is enabled or disabled. On: Starting is performed at reduced speed for 2s and then movement is restored to normal speed. Off: Soft start is disabled.	(ON)	
	<b>Ph c</b>	The PHOT Input operating mode is selected. On: PHOT Input is activated during closure only. During closure: the opening of the contact causes the motor stop and the immediate movement reversion (open). Off: PHOT Input is activated in both opening and closing. In the opening phase: when opened, the contact causes the motor stop. When the photocell is released, the motor restarts in the opening phase. In the closing phase: when opened, the contact causes the motor stop. When the photocell is released, the motor inverts its movement direction (open).	(ON)	
	<b>inur</b>	The movement reversion during opening after the activation of the anti-crash device (amperometric sensor) is enabled or disabled. On: enabled reversion. The amperometric sensor activation causes the movement reversion. Off: disabled reversion. The amperometric sensor activation causes the movement stop.	(OFF)	
	<b>SASo</b>	Enables or disables door stop before the opening mechanical stop ON: The control unit stops the door around 5 cm before the mechanical stop. In this way stop is progressive and without vibrations. OFF: The control unit stops the door on the opening mechanical stop	(OFF)	



<b>LOGICS</b>	<i>SLdo</i>	Braking during opening is enabled or disabled: On: Activated braking in the closing phase Off: Activated braking in both opening and closing phases Braking starts next to the opening and closing mechanical stops	(OFF)	
	<i>cLSL</i>	Slow closing of the door for the entire stroke is enabled or disabled. Compliance with regulations in force is facilitated in case of heavy doors. On: slow closure of the door Off: normal closure of the door	(OFF)	

	<b>MENU</b>	<b>FUNCTION</b>
<b>RADIO</b>	<i>PP</i>	By selecting this function, the receiver awaits (Push) for a transmitter code to be assigned to the step-by-step function. Press the transmitter key to be assigned to this function. If the code is valid, it will be stored in memory and OK will be displayed. If the code is not valid, the Err message will be displayed.
	<i>SA Ir</i>	By selecting this function, the receiver waits (Push) for a transmitter code to be assigned to the SAIR function. Press the transmitter key to be assigned to this function. If the code is valid, it is stored in memory and OK appears. If the code is not valid, the wording Err is displayed.
	<i>cLr</i>	By selecting this function, the receiver awaits (Push) for a transmitter code to be erased from memory. If the code is valid, it will be erased and OK will be displayed. If the code is not valid or it is not in memory, the Err message will be displayed.
	<i>rEr</i>	The receiver memory is completely erased. Confirmation is asked.

	<b>MENU</b>	<b>FUNCTION</b>
	<i>nPRn</i>	The number of cycles (open+close) completed by the system is displayed. When the push-button <PG> is pressed once, the first 4 digits are displayed, if the push-button is pressed once more, the last 4 digits are displayed. E.g. <PG> 0012 >>> <PG> 3456: 123.456 cycles were performed.
	<i>Auto</i>	The self-calibration of the triggering thresholds of the anti-crash device (amperometric sensor), as well as the stroke learning are performed. See paragraph SELF-LEARNING
	<i>rES</i>	RESET of the control unit. WARNING: Returns the control unit to the default values. When the <PG> push-button is pressed once, the RES wording begins to flash, if the push-button <PG> is pressed once more, the control unit is reset. Note: neither the transmitter codes nor the position and stroked of the gate leaf will be erased from the receiver.

**ATTENTION:**

**After any LOGIC change or control panel reset, it is necessary to perform a self-learning procedure (Menu Auto - See Stroke self learning)**

**RUN SELF-LEARNING AND ANTI-CRUSHING DEVICE SETTING**

When operator assembly and wiring is completed, parameters and logic are programmed, self learning allows the operator to learn the stroke and self adjusts amperometric sensor thresholds.

First of all place the opening and closing mechanical stops:

- manually release the door and completely close it. Place the closing mechanical stop in the closed position on the driving carrier and fix it.
- completely open the door. Place the opening mechanical stop in the open position on the driving carrier and fix it.

For further information, please refer to the operator (JM4) manual.

Now the opening and closing positions can be memorized:

Enter menu Auto and press the button < PGM > , PUSH will be displayed.

Press again the button < PGM >: self-learning is beginning: PRG will be displayed, and the control panel completes at least three opening/closing cycles.

When the procedure is completed OK will be displayed.

This procedure can be followed from any position of the gate/door leaf and can be stopped at any moment by pressing keys <+> and <-> at the same time, or through the activation of STOP/PHOTO/DAS/PP/CLOSE inputs.

If the procedure doesn't have positive result, the message ERR is displayed, please verify possible obstacles or attrition points.



## BACKUP BATTERY

An optional accessory is available for backup in case of mains failure.

The set is composed by the battery charger card CB.24V, two rechargeable 12V batteries, fixing clamp, screw and wirings. The batteries fit on the base of the operator as shown in Fig.3; the card has to be fixed next to the control board CP.J4, Fig. 4.

CB.24V wiring between the secondary winding of the transformer and the entries 0/SLOW/24V/FAST is shown in Fig.2.

With mains power on, DL2 green LED is on and the batteries are charged by the CB.24V.

In case of power failure, the CB.24V switched to the batteries, and the DL1 red LED is on. The F10A fuse protects the control unit during operation with the emergency battery.

In case of power failure and batteries low, both LEDs are off. The buffer battery operates, and progressively lowers, until 18V is reached. When this value is reached, the battery is disconnected.

Without mains the 24V accessories output is polarized and no slowing down is possible.

## EXAMPLE OF PROGRAMMING

Let us suppose it is necessary to:

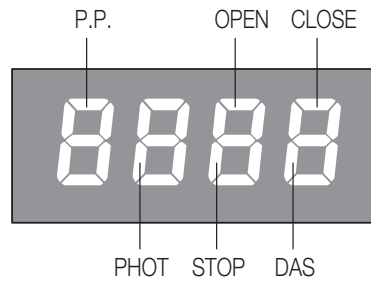
- set an automatic closing time (TCA) of 100s
- activate pre-blinking

Perform the operations described below step by step:

Step	Press	Display	Notes
1	PG	PRr	First menu
2	PG	tcr	First function of the first menu
3	PG	040	Value currently set for the function selected
4	+↑ -↓	100	Set the desired value with the <+> and <-> keys
5	PG	PrG	The value is programmed
		tcr	When programming has been made, the display goes to the function just set
6	+ -	PRr	Press <+> and <-> simultaneously to go to the higher menu
7	-	LoG	Second menu
8	PG	tcr	First function of the second menu
9	-	PrE	Press <-> several times to select PRE logic
10	PG	oFF	Value currently set for the function selected
11	+↑ -↓	on	Set the desired value with the <+> and <-> keys
12	PG	PrG	The value is programmed
		PrE	When programming has been made, the display goes to the function just set
13	+ -	PRr	Press <+> and <-> simultaneously to go to the higher menu and quit programming or wait 30s.

## DIAGNOSTICS

In the event of malfunctions, by pressing key + or - the status of all inputs (limit switches, control and safety) can be displayed. One segment of the display is linked to each input. In the event of failure it switches on according to the following scheme.



N.C. inputs are represented by the vertical segments. N.O. inputs are represented by the horizontal segments.

## ERROR MESSAGES

The control panel checks the correct operation of the safety devices. In the event of faults the following messages can be displayed:

- Err* Error: self-setting of the amperometric device or storage of remote control codes in memory.
- Err 1* Error: encoder failure. In case of breakdown to the encoder, the control panel is set formality manual. To restore the normal functionality, switch off and switch on the control panel.
- Err 2* OPEN or CLOSE relays failure.

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