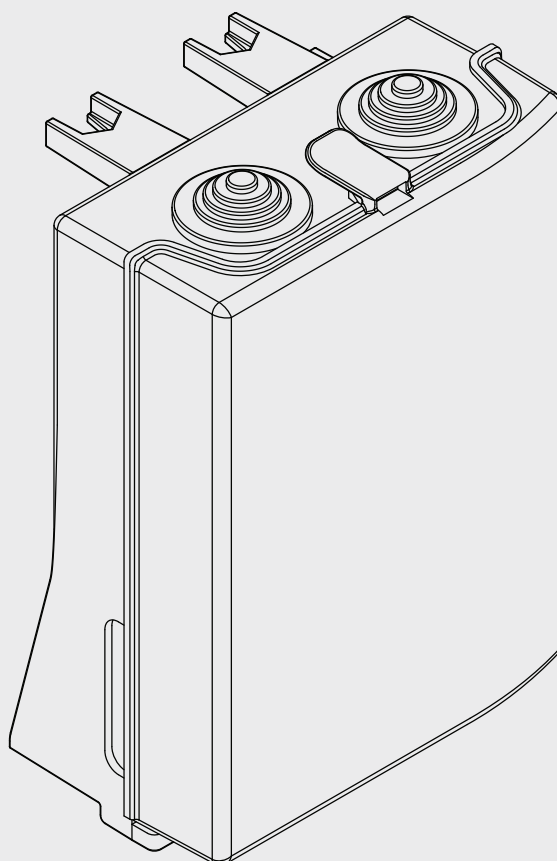
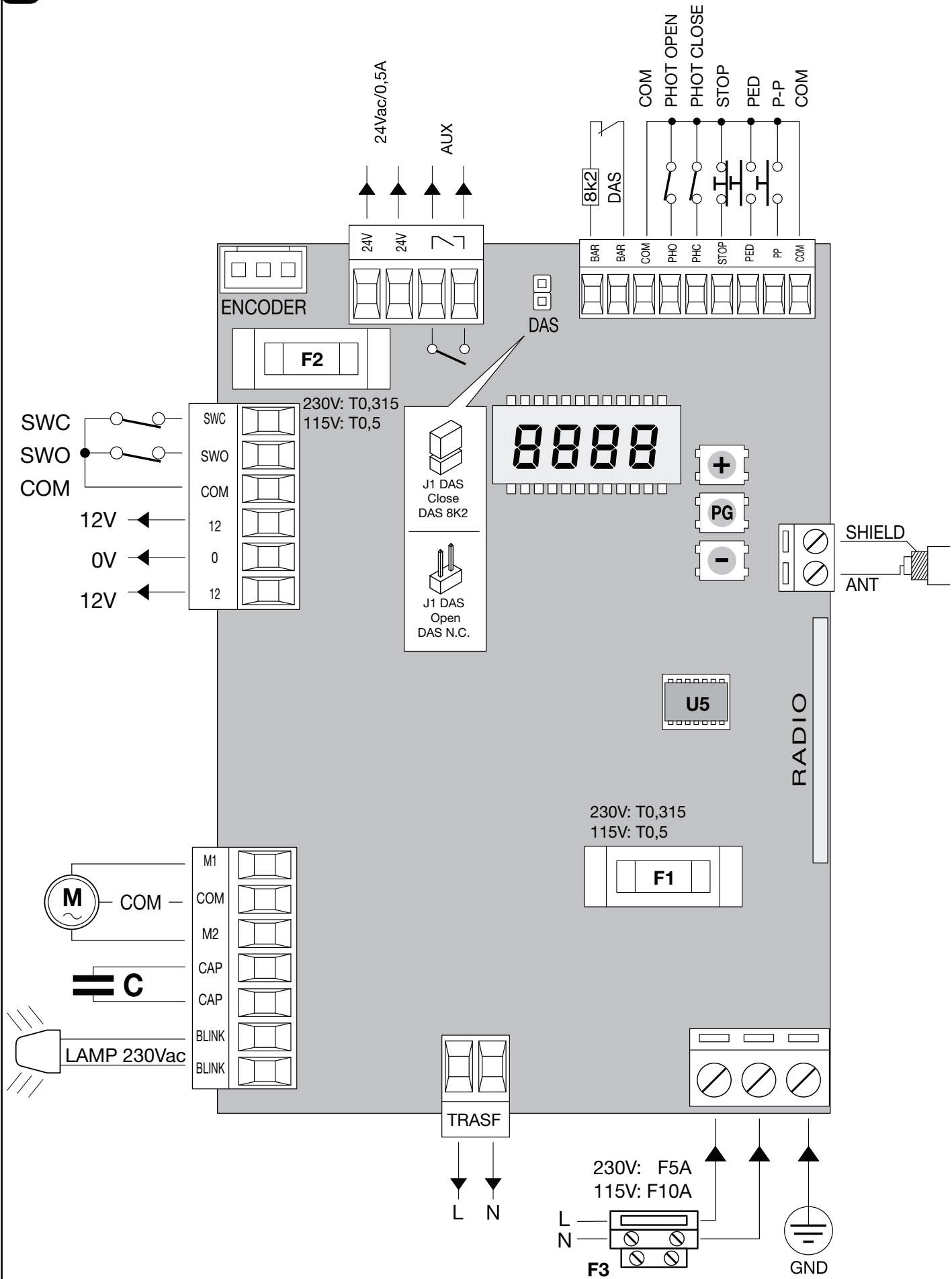


# CP.BULL8 OM

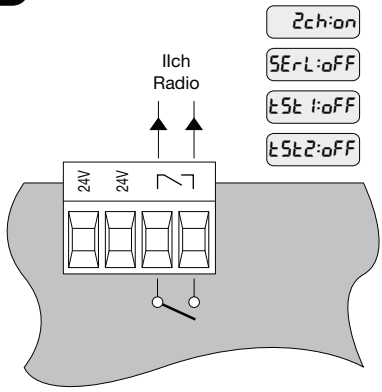


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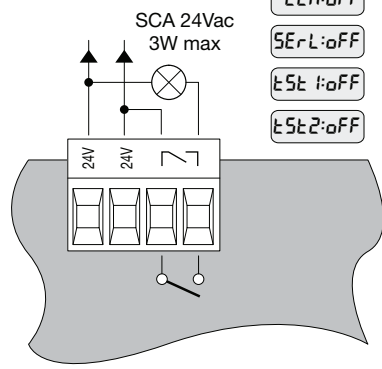




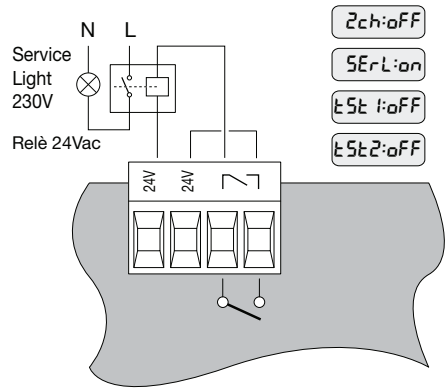
2



2ch: on  
 5ErL: oFF  
 tSt 1: oFF  
 tSt 2: oFF

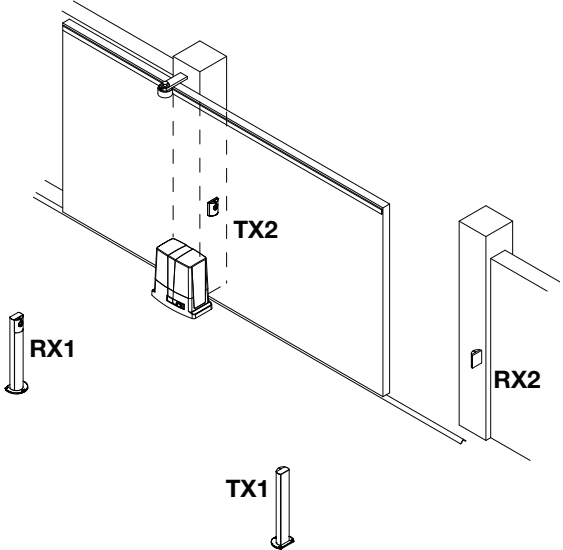
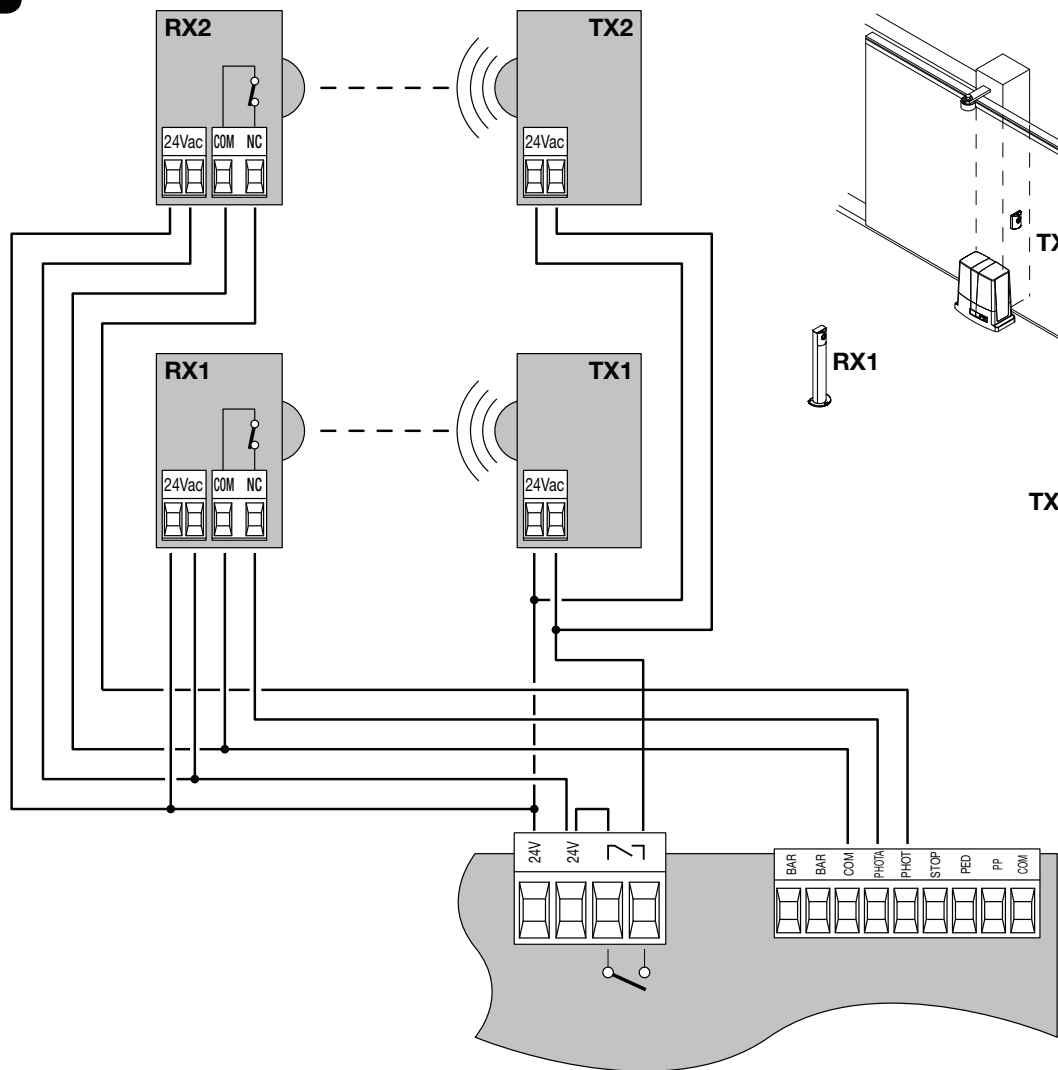


2ch: oFF  
 5ErL: oFF  
 tSt 1: oFF  
 tSt 2: oFF



2ch: oFF  
 5ErL: on  
 tSt 1: oFF  
 tSt 2: oFF

3



2ch: oFF  
 5ErL: oFF  
 tSt 1: on  
 tSt 2: on

## EC Declaration of conformity

Declaration pursuant to Directives 2004/108/EC(EMC); 2006/95/EC(LVD)

Manufacturer:

**Automatismi Benincà SpA**

Address:

**Via Capitello, 45 - 36066 Sandrigo (VI) - Italy**

Declares that the product:

**Command central for 1 230 Vac motor, for sliding doors: CP.BULL 80M**

is compliant with the conditions of the following EC Directives:

• **DIRECTIVE 2004/108/EC OF THE EUROPEAN PARLIAMENT AND COUNCIL** of December 15 2004 regarding the approximation of the legislations of the member States relative to electromagnetic compatibility and that repeals directive 89/336/CEE, according to the following concurred norms:

EN 61000-6-2:2005, EN 61000-6-3:2007.

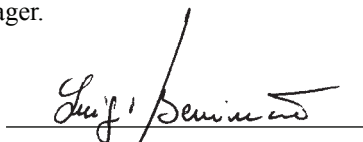
• **DIRECTIVE 2006/95/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL** of December 12 2006 concerning the approximation of the legislations of the member States relative to electrical material destined to be used within certain voltage limits, according to the following concurred regulations:

EN 60335-1:2002 + A1:2004 + A11:2004 + A12:2006 + A2:2006 + A13:2008; EN 60335-2-103:2003.

if applicable :

• **DIRECTIVE 1999/5/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL** of March 9 1999 regarding radio devices and terminal and telecommunications devices and the reciprocal recognisances of their conformity, according to the following concurred regulations: ETSI EN 301 489-3 V1.4.1 (2002) + ETSI EN 301 489-1 V1.4.1 (2002) + ETSI EN 300 220-3 V1.1.1 (2000) + EN 60950-1 (2001)

Benincà Luigi, Legal manager.  
Sandrigo, 02/11/2010.



## 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

Control unit supply	24 Vdc
Power supply	230 Vac 50/60 Hz or 115Vac 50/60Hz according to the version
Output supply	1 motor 230Vac
Power maximum motor	280 W
Output supply accessories	24Vac 500mA max.
Protection level	IP54
Operating temp.	-20°C / +50°C
Radio receiver	built in 433,92 MHz configurable (rolling-code or programmable + rolling-code)
Rolling code transmitters supported	64 rolling-code

## CP.BULL8 OM CONTROL UNIT

### WIRE DIAGRAM

Wire connections shown in Fig. 1 are described hereunder:

Terminals	Function	Description
L/N	Power supply	CP.BULL8 OM: Input, 230Vac 50Hz (L-Phase/N-Neutral) CP.BULL8 OM 115: Input, 115Vac 60Hz (L-Phase/N-Neutral)
GND	GND	Earth (compulsory)
ANT/SHIELD	Antenna	Connection antenna to the built-in receiver (ANT-signal/SHIELD-screen).
+12V	COMMON	Common for control inputs.
PP	Step-by-Step	Input, step-by-step push-button (N.O. contact) Pre-settable as Input, OPEN with OPCL logics.
PED	PEDESTRIAN	Input, pedestrian push-button (N.O. contact). It controls the partial opening, configurable through parameter TPED. At end of TCA time (if activated), closure control signal is sent. Pre-settable as Input, CLOSE with OPCL logics.
STOP	STOP	Input, STOP push-button (N.C. contact)
PHO	PHOT O	Input, (N.C. contact) for safety devices (e.g. photocells). During closure: if the contact is opened, the motor stops. With OPCL logics, when the photocell is no longer obscured, the motor reversion occurs (gate opens). During opening: if the contact is opened, the motor stops. with OPCL logics When the photocell is no longer obscured, the motor restarts opening.
PHA	PHOT C	Input, (N.C. contact) for safety devices (e.g. photocells). During closure: it can be preset by PHCL logics. During opening: it can be preset by PHCL logics.
+12V	COMMON	Common for control inputs.
BAR/BAR	SENSITIVE EDGE	Input, sensitive edge contact Resistive edge: Jumper "DAS" closed Mechanical edge: Jumper "DAS" open If the edge is activated, the gate stops and a movement reversion occurs for about 3 sec. If the edge is not in use: Jumper "DAS" open, jumper between terminals BAR/BAR.
	SCA Service light RX 2° Ch PHOTO TEST	Free, N.O. contact. Pre-settable as: - SCA (open gate indicator lamp): open contact when gate is closed, fast flashing light when gate is closing, slow flashing light when gate is opening and closed contact when gate is open. See wire diagram, Fig.2). (Logics 2CH:OFF, SERL:OFF, TST1:OFF, TST2:OFF); - Timed service light (see SERL logics and diagram in Fig.2); - Output, second radio channel (see 2CH logics and diagram in Fig.2); - PHOTO TEST to power the transmitters of photocells in TEST mode (see TST1, TST2 logics and diagram in Fig.3).
24Vac	24Vac	Output, power supply of accessories, 24Vac/500mA max
ENC1	ENCODER	Connector for connection of anti-crash sensor (ENCODER)
SWC	SWC	Input, CLOSE limit switch (N.C. contact)
SWO	SWO	Input, OPEN limit switch (N.C. contact)

COM	COM (+12V)	Common for limit switches.
12-0-12	Secondary	Connection of secondary winding of 24V transformer
M1/COM/M2	Motor	Motor connection, 230Vac – single phase: M1-Phase/ COM-Common/ M2-Phase
CAP/CAP	Capacitor	Connection to capacitor
FLASH/FLASH	Flashing light	Connection to flashing light, 230Vac 40W max.
TRASF	Primary	Connection to transformer primary winding

## TO CHECK CONNECTIONS

Before programming the control unit, check that the motor is correctly connected:

- 1) Cut off power supply.
- 2) Manually release the gate leaf, move the same at approx. half stroke and block it again.
- 3) Power the system again.
- 4) Give a step-by-step control through push-button <->.
- 5) The gate leaf should open.  
If no movement is caused, invert the motor connections (MOT<>MOT) and limit switches SWO<>SWC.
- 6) Perform a complete operation, from limit switch to limit switch, without stops, to allow for the gate stroke memorisation.

## 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. These keys can be selected by pressing + and – keys.

- 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.

If the push-button <-> is pressed with display off, this is like giving a step-by-step control.

When the board is switched on, the software version is displayed for around 5 sec

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.

## PARAMETERS, LOGICS AND SPECIAL FUNCTIONS

In the tables hereunder the single functions available in the control unit are shown.

PARAMETERS (PRr)			
MENU	FUNCTION	MIN-MAX- (Default)	MEMO
$t_{cA}$	Automatic closure time. It is activated only with “ $t_{cA}$ ”=ON logic. At the end of the preset time, the control unit controls a closure operation.	1-240-(40s)	
$t_n$	Operating time. The operating time is adjusted at normal speed during motor opening and closing phases.	1-250-(90s)	
$t_{PEd}$	The area covered by the gate during its partial opening movement (pedestrian) is adjusted.	20-250-(50 cm)	
$t_{Sn}$	The area covered by the gate during the braking phase is adjusted. 0 = braking disabled	0-250-(0 cm)	
$Pn_o$	The torque applied to the motor in the opening phase is adjusted.*	1-99-(40%)	
$Pn_c$	The torque applied to the motor in the closing phase is adjusted*.	1-99-(40%)	
$Ps_o$	The torque applied to the motor during braking in the closing phase is adjusted.*	1-99-(50%)	
$Ps_c$	The torque applied to the motor during braking in the opening phase is adjusted*.	1-99-(50%)	
$SEAU$	The intervention threshold of the anti-crashing device (Encoder) during the phase at normal speed is adjusted.* 99:maximum sensitivity - 0: minimum sensitivity	0-99-(0%)	

<b>SEAr</b>	The intervention threshold of the anti-crashing device (Encoder) during braking is adjusted *. 99:maximum sensitivity - 0: minimum sensitivity	0-99-(0%)	
<b>TL5</b>	Activated only with SErL:ON Logic. The activation time of the service light is adjusted.	1-240-(60s)	
<b>ibrA</b>	The force of the motor brake is adjusted. 0: disabled braking - 1:minimum braking - 99: maximum braking	0-99-(50%)	

**\* WARNING: An incorrect setting of these parameters may cause danger.  
Please comply with regulations in force!**

<b>LOGIC (LoG)</b>			
<b>MENU</b>	<b>FUNCTION</b>	<b>ON-OFF- (Default)</b>	<b>MEMO</b>
<b>tCA</b>	The automatic closure is enabled or disabled On: enabled automatic closure Off: disabled automatic closure	(ON)	
<b>ibL</b>	The multi-flat function is enabled or disabled. 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. Off: disabled multi-flat function.	(OFF)	
<b>ScL</b>	The rapid closure is enabled or disabled On: rapid closure is enabled. When the gate is open or moving, the photocell activation causes the automatic closure of the gate after 3 s. It is activated only with TCA:ON Off: rapid closure is disabled.	(OFF)	
<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>LtCA</b>	During the TCA time, the blinker is enabled or disabled. On: Activated blinker. Off: De-activated blinker.	(OFF)	
<b>cLoc</b>	The OPEN input mode is selected On: OPEN input with WATCH function. To be used for the connection of timed opening/closing. (CLOSED contact - open gate. OPEN contact - normal operation). Off: OPEN input with OPEN function.	(OFF)	
<b>htr</b>	The Operator function is enabled or disabled. On: Operator function enabled. During operation, the OPEN/CLOSE push-buttons must be kept pressed. Off: Automatic operation.	(OFF)	
<b>ibrA</b>	During the TCA phase, the PP and PED controls are enabled or disabled. On: PP and PED controls are disabled. Off: PP and PED controls are enabled.	(OFF)	
<b>Enc</b>	The Encoder is enabled or disabled. On: enabled Encoder, braking activated. Off: disabled Encoder, braking deactivated	(ON)	
<b>trI</b>	The TRIAC test is enabled or disabled. On: Test on: if TRIAC is faulty the motor does not start. Off: no test on TRIAC is performed.	(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>2ch</b>	The second radio channel is enabled or disabled on terminal AUX. On: AUX output, preset as second radio channel. SERL, TST1 and TST2 logics should be preset on OFF. Off: AUX output can be preset as SCA, or by SERL, TST1 and TST2 logics.	(OFF)	
<b>SErL</b>	The service light function is enabled or disabled on AUX output. On: At each operation the contact is closed for the time preset with TLS parameter. TST1 and TST2 logics should be preset on OFF. For the light control, use an auxiliary relay. Off: AUX output can be preset as SCA, or by 2CH, TST1 and TST2 logics.	(OFF)	

<b>tSt1</b>	Check of photocells on PHOT O input is enabled or disabled. On: check is enabled. If check is not successful, no operation is enabled. Off: AUX output can be preset as SCA, or by 2CH, SERL and TST2 logics.	(OFF)	
<b>tSt2</b>	Check of photocells on PHOT C input is enabled or disabled. On: check is enabled. If check is not successful, no operation is enabled. Off: AUX output can be preset as SCA, or by 2CH, SERL and TST1 logics.	(OFF)	
<b>PhcL</b>	The operating mode of the PHOT C input is selected. On: PHOT C input is activated in both opening and closing phases. In the opening phase: the contact opening causes the motor stop. When the photocell is released, the motor restarts in the opening phase. In closing phase: the contact opening causes the motor stop. When the photocell is released, the motor inverts the movement direction (open). Off: The PHOT C input is activated in the closing phase only. In the closing phase: the contact opening causes the motor stop and the immediate reversion of the operation direction (open).	(OFF)	
<b>oPcL</b>	PP input as OPEN and PED input as CLOSED are enabled or disabled. On: PP input is enabled as OPEN and PED input is enabled as CLOSED. Off: PP and PED inputs are enabled with their function.	(OFF)	
<b>SPn</b>	Enables or disables starting torque function. On: Starting torque enabled. At the start of each manoeuvre for 2s the motor operates at maximum torque. Off: Starting is performed at reduced speed for 2s and then movement is restored to normal speed.	(ON)	
<b>rEn</b>	The remote storage of the radio transmitter codes is enabled or disabled (see par. REMOTE LEARNING). On: Enabled remote storage Off: Disabled remote storage.	(ON)	

### RADIO (*rRd*)

MENU	FUNZIONE
<b>PP</b>	By selecting this function, the receiver is waiting for (Push) a transmitter code to be assigned to the step-by-step function. Press the transmitter key, which is 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.
<b>2ch</b>	By selecting this function, the receiver is waiting for (Push) a transmitter code to be assigned to the second radio channel. Press the transmitter key, which is 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.
<b>PEd</b>	When this function is selected, the receiver awaits (Push) a transmitter code to be assigned to the pedestrian opening function (see TPED parameter). Press the transmitter key, which is 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.
<b>clr</b>	By selecting this function, the receiver is waiting for (Push) a transmitter code to be erased from memory. 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.
<b>rtr</b>	The memory of the receiver is entirely erased. Confirmation for the operation is asked. By selecting this function, the receiver waits for (Push) the GPM key to be pressed again to confirm the operation. At end of erasing, the OK message is displayed

Note: The transmitters are stored in an EPROM memory (Fig.1 -U5), which can be removed and repositioned in a new control unit, it required.

### CYCLES NUMBER (*nRn*)

Displays the number of complete cycles (open+close) carried out by the automation.  
When the <PG> button is pressed for the first time, it displays the first 4 figures, the second time it shows the last 4. Example <PG> 00 12 >>> <PG> 3456: made 123.456 cycles.



## MAINTENANCE CYCLES (MRC)

This function enables to activate the maintenance request notice after a number of manoeuvres determined by the installer. To activate and select the number of manoeuvres, proceed as follows:  
Press button <PG>, the display will show OFF, which indicated that the function is disabled (default value).  
With the buttons <+> and <-> select one of the numeric values proposed (from OFF to 100). The values are intended as hundreds of cycles of manoeuvres (for example: the value 50 indicates 5000 manoeuvres).  
Press the OK button to activate the function. The display will show the message *Prd*. The maintenance request is indicated to the user by keeping the indicator lamp lit up for other 10 sec after the conclusion of the opening or closing operation.

## RESET (RE)

RESET of the control unit. ATTENTION!: Returns the control unit to the default values.  
Pressing the <PG> button for the first time causes blinking of the letters RE, pressing the <PG> button again resets the control unit.  
Note: The transmitters are not erased from the receiver nor is the access password.  
All the logics and all the parameters are brought back to default values, it is therefore necessary to repeat the autose procedure.

## AUTOSET (AUTO)

The self-calibration of the triggering thresholds of the anti-crash device, as well as the stroke learning are performed. When the <PG> push button is pressed once, the PUSH wording starts flashing. If the <PG> button is pressed once more the self-calibration procedure starts and the PRG wording is displayed. The gate will carry out at least 2 complete operations. At the end of this procedure, OK is displayed. This procedure can be performed with the gate in any position.  
The self-calibration procedure can be stopped at any moment with the contemporary pressure of <+> and <->. If the procedure has no positive result (or if ENC=OFF), the Err message is displayed.

## PROTECTION CODE (CODE)

It allows to type in an access protection code to the programming of the control unit.  
A four-character alphanumeric code can be typed in by using the numbers from 0 to 9 and the letters A-B-C-D-E-F.  
The default value is 0000 (four zeros) and shows the absence of a protection code.  
While typing in the code, this operation can be cancelled at any moment by pressing keys + and - simultaneously. Once the password is typed in, it is possible to act on the control unit by entering and exiting the programming mode for around 10 minutes in order to allow adjustments and tests on functions.  
By replacing the 0000 code with any other code, the protection of the control unit is enabled, thus preventing the access to any other menu. If a protection code is to be typed in, proceed as follows:

- select the Code menu and press OK.
- the code 0000 is shown, also in the case a protection code has been previously typed in.
- the value of the flashing character can be changed with keys + and -.
- press OK to confirm the flashing character, then confirm the following one.
- after typing in the 4 characters, a confirmation message "CONF" appears.
- after a few seconds, the code 0000 appears again
- the previously stored protection code must be reconfirmed in order to avoid any accidental typing in.

If the code corresponds to the previous one, a confirmation message "OK" appears.  
The control unit automatically exits the programming phase. To gain access to the Menus again, the stored protection code must be typed in.

**IMPORTANT: TAKE NOTE of the protection code and KEEP IT IN A SAFE PLACE for future maintenance operations.**  
**To remove a code from a protected control unit it is necessary to enter into programming with the password and bring the code back to the 0000 default value.**  
**IF YOU LOOSE THE CODE, PLEASE CONTACT THE AUTHORISED SERVICE CENTER FOR THE TOTAL RESET OF THE CONTROL UNIT.**

## STROKE LEARNING

For a correct operation of braking (with SLD logic: ON) it is essential that the stroke is memorised. This can be performed either using the above described AUTO function or when the first operation is completed (then carried out without interruptions) from open limit switch to close limit switch (or viceversa).  
During the stroke learning the activation threshold values of the PMO and PMC anti-crash sensor and, if a slowing down is required, the PSO and PSC values, are also calculated.  
However, these values can be manually modified at a second time.  
If the encoder is activated, the position of the gate leaf is stored in memory and reset also in case of power failure.  
If the encoder is disabled, in case of power failure a new complete operation will be required to memorise the stroke and reset braking.  
Note: If the automatic system is released and manually operated, the following operation might not perform braking correctly. Also in this case a new complete operation will be required to reset the regular operation of the system.

## OPERATING MODE WITH ENABLED/DISABLED ENCODER

### With ENC LOGICS =ON:

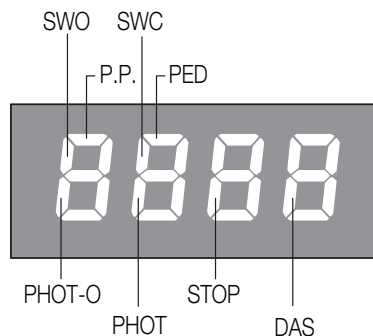
- the anti-crash sensor is activated. Adjust sensitivity through parameters SEAV and SEAR in compliance with regulations in force. An accurate adjustment of the motor brake (IBRA parameter) may help compliance with safety regulations as well.  
In the event of power failure, the stroke is constantly updated and stored in memory together with the gate position.

### With ENC LOGICS =OFF:

- the anti-crash sensor is disabled.  
- if parameter TSM>0 (braking activated), the first operation is performed at normal speed for the gate stroke memorisation, also in the event of power failure.

## 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.

## REMOTE COPY OF TRANSMITTER CODES

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

**IMPORTANT:** This procedure should be performed with gate leaves open, during the TCA dwell time. Proceed as follows:

- 1 Press the hidden key of the already memorised transmitter.
- 2 Within 5 seconds, press the key of the already memorised transmitter which corresponds to the channel to be matched with the new transmitter code. The flashing light switches on.
- 3 Within 10 sec, press the hidden key of the new transmitter.
- 4 Within 5 sec, press the key of the new transmitter to be matched to the channel selected at point 2. The flashing light switches off.
- 5 The receiver memorises the new transmitter and exits immediately the programming mode.

## ERROR MESSAGES

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

<i>Err 1</i>	Motor	Technical assistance is required.
<i>Err 4</i>	Error, PHOT O circuit check	Check connections, alignment of PHOT O photocell or obstacle present.
<i>Err 5</i>	Error, PHOT C circuit check	Check connections, alignment of PHOT C photocell or obstacle present.
<i>Enc</i>	Error, encoder	Error to connection or faulty encoder.
<i>APP</i>	Obstacle detection	An obstacle present is indicated (anti-crash device).

## FUSES

- F1** Protection fuse for motor and blinker
- F2** Protection fuse of accessories and signals
- F3** Protection of 230V/115V line

## 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.

**BENINCA<sup>®</sup>**

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