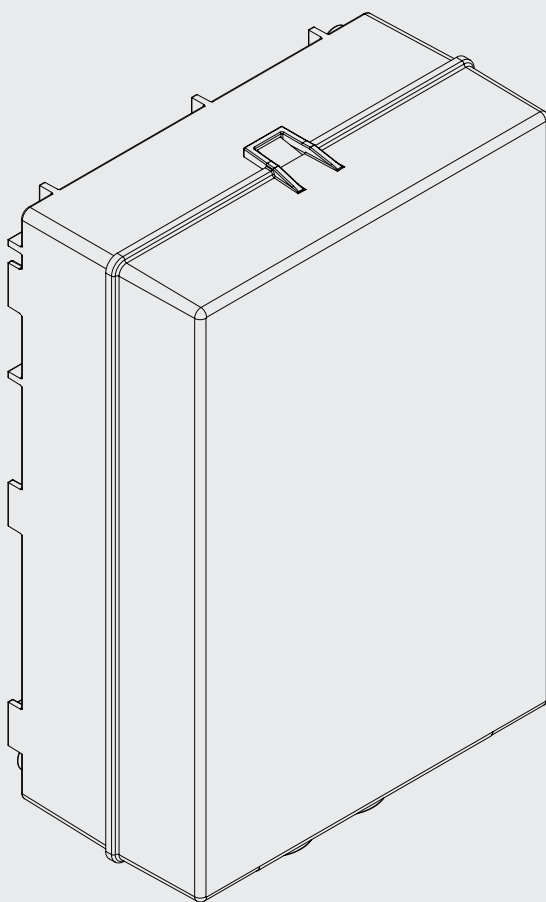
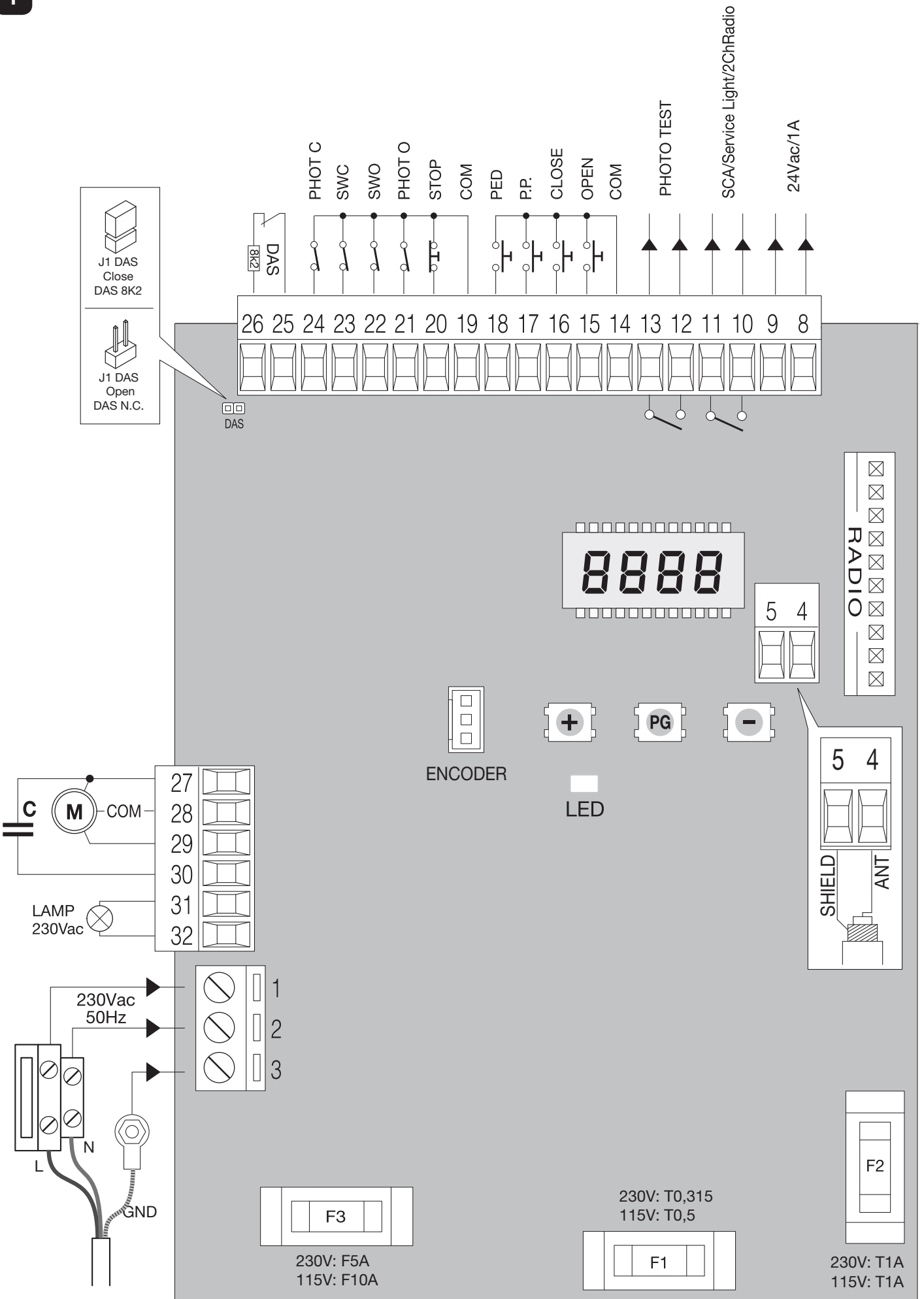


CP.BISON OM

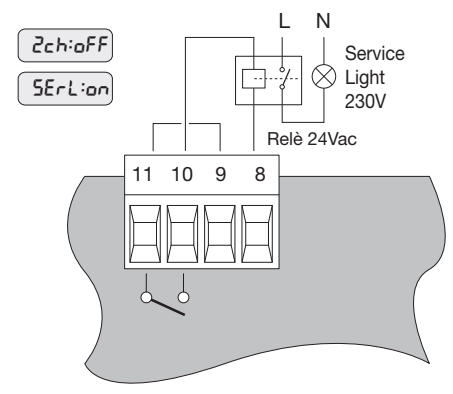
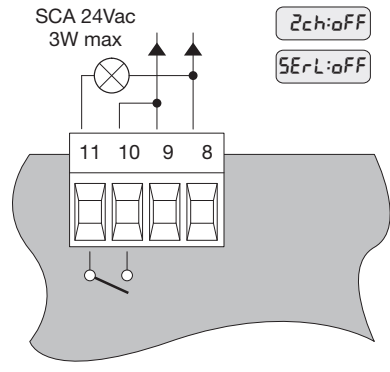
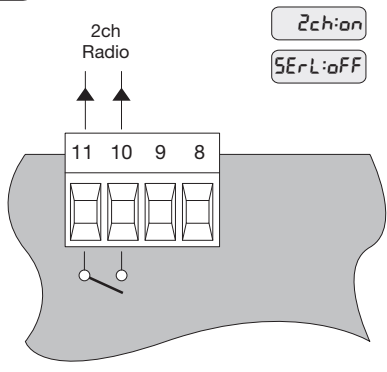


BENINCA[®]
TECHNOLOGY TO OPEN

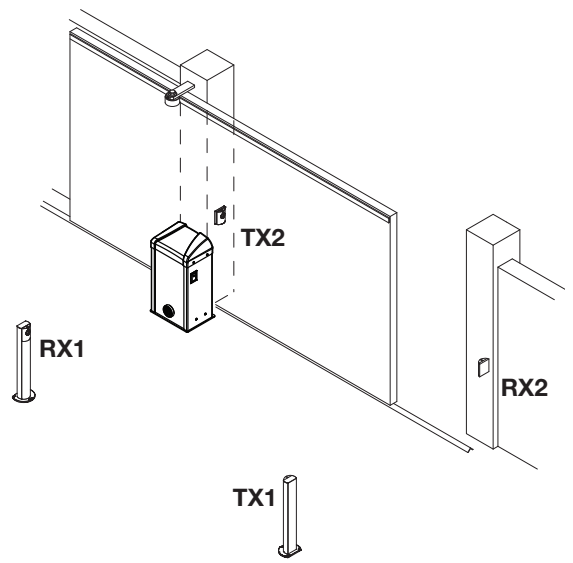
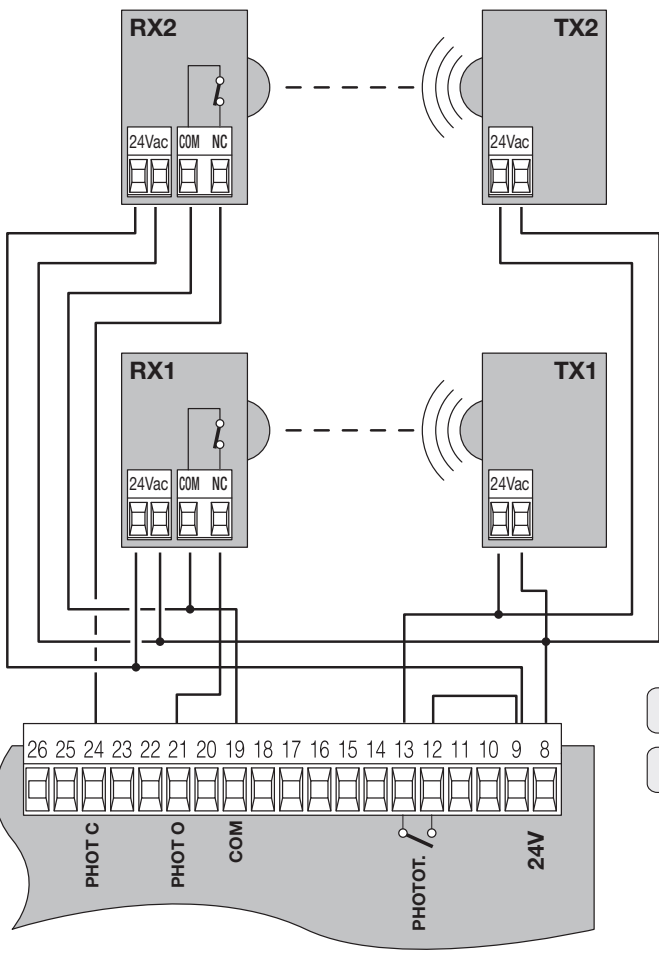




2

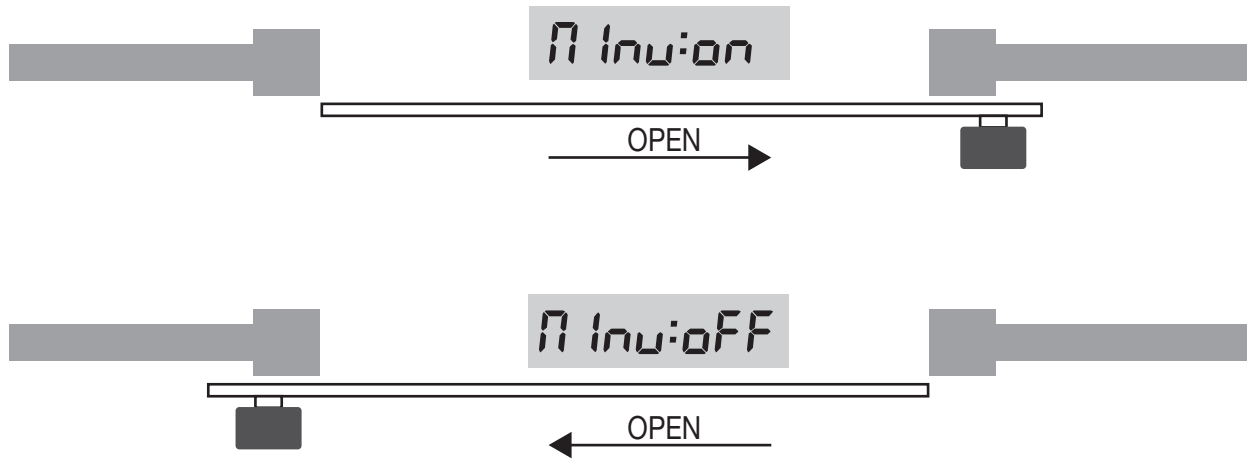


3



tSt 1: on
tSt 2: on

4



EC declaration of conformity

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

Herewith declares that: control unit **CP.BISON OM**.
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, 10/10/2011.



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.

TECHNICAL DATA

Power supply	230 Vac 50/60 Hz
Output supply	1 motor 230Vac
Power maximum motor	1000 W
Output supply accessories	24Vdc 500mA max.
Protection level	IP54
Operating temp.	-20°C / +70°C
Radio receiver	433.92 MHz, built-in and configurable (rolling-code or fixed+rolling-code+ ARC Advanced Rolling Code)
Rolling code transmitters supported	64

CP.BISON OM CONTROL UNIT

INPUT/OUTPUT FUNCTIONS

Terminal No.	Function	Description
1-2	Power supply	Input, 230Vac 50Hz (1-Phase/2-Neutral)
3	GND	Ground connection. Use the connector preset on the fitting plate of the control unit. Earthing is COMPULSORY, through this connection also the metal structure of motorization are grounded.
4-5	Aerial	Connection of the insertable radio receiver card (4-signal/5-display).
8-9	24Vac	Output, power supply of accessories, 24VAC/1A max
10-11	SCA o Service light	Normally Open clean contact, configurable as SCA (open gate light), timed service light (see SERL Logic) or as second radio channel (see Logics 2 Ch).
12-13	PHOTO TEST	N.O. free contact. It is used to power photocell transmitters in TEST operating mode. See diagram Fig.3 and 5.1 and 5.2 Logic.
14	COM	Common for control inputs.
15	OPEN	Input, push-button for OPEN contact (Normally Open contact) Contact usable for timed openings through timer.
16	CLOSE	Input, CLOSE push-button (N.O. contact)
17	Step-by-Step	Input, step-by-step push-button (N.O. contact)
18	PED	Input, pedestrian push-button (N.O. contact). It controls the partial opening. Configuration is through parameter PED. When TCA time has elapsed (if activated) a closure control signal is sent.
19	COM	Common, for limit switches and safety devices
20	STOP	Input, STOP push-button (N.C. contact)
21	PHOTO	Input, (N.C. contact) for safety devices (e.g. photocells). In the closing phase: the contact opening causes the motor stop. Common: when the photocell is released, the motor inverts the movement direction (open). In the opening phase: the contact opening causes the motor stop. When the photocell is released, the motor re-starts the opening operation.
22	SWO	Input, OPEN limit switch (N.C. contact)
23	SWC	Input, CLOSE limit switch (N.C. contact)
24	PHOT C	Input (N.C. contact) for safety devices (e.g. photocells). In the closing phase: Configuration through PHCL Logic. In the opening phase: Configuration through PHC Logic.
25-26	DAS	Input, safety edge Resistive edge: "DAS" Jumper closed Mechanical edge: "DAS" Jumper open When the edge is activated, the gate movement is stopped and reversed for about 3s. If the edge is not in use: "DAS" Jumper open, 25-26 terminals are short-circuited.
27-28-29	Motor	Connection of motor 230Vac - single-phase: 27-Phase/28-Common/29-Phase
27-30	Capacitor	Connection of capacitor
31-32	Blinker	Connection of blinker, 230Vac 40W max.

To check connections:

- 1) Cut-off power supply.
- 2) Manually release the wing, move it to approx. half-stroke and lock it again.
- 3) Reset power supply.
- 4) Send a step-by-step control signal by pressing the button or the remote control key.
- 5) The door/gate should move in the opening phase. Conversely, use the MINV logics to invert the opening direction.
- 6) Cut-off and restore power supply.

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 torque.

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 some 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/PHO/PHA/DAS/PP/PED inputs.

If the procedure is not successful, the wording ERR appears. Check that no obstacles or frictions are present.

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.

To access programming:

- 1 Press the button <PG>, the display goes to the first menu, Parameters "PAR".
- 2 With the <+> or <-> button, select the menu you want (PAR>>LcR>>Rad la>>nPRn>>RE5)
- 3 Press the button <PG>, the display shows the first function available on the menu.
- 4 With the <+> or <-> button, select the function you want.
- 5 Press the button <PG>, the display shows the value currently set for the function selected.
- 6 With the <+> or <-> button, select the value you intend to assign to the function.
- 7 Press the button <PG>, the display shows the signal "PRC" which indicates that programming has been completed.

Notes:

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

Simultaneously pressing <+> and <-> when the display is switched off shows the card software release.

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, LOGIC AND SPECIAL FUNCTIONS

The tables below describe the individual functions available in the control unit.

PARAMETERS (PAR)			
MENU	FUNCTION	MIN-MAX-(Default)	MEMO
LcR	Automatic closure time. It is activated only with "LcR"=ON logic. At the end of the preset time, the control unit controls a closure operation.	3-240-(40s)	
Ln	Operating time. It is activated only with logics ENC : OFF. The operating time is adjusted during motor opening and closing phases.	1-250-(90s)	
LPEd	The passage left open by the gate leaf during the partial opening (pedestrian) is adjusted.	5-100-(20%)	
LsN	The area covered by the gate during the braking phase is adjusted. 0 = braking disabled.	0-100-(0%)	
PNo	The torque applied to the motor in the opening phase is adjusted.*	1-99-(40%)	
PNc	The torque applied to the motor in the closing phase is adjusted *.	1-99-(40%)	
PSo	The torque applied to the motor during braking in the closing phase is adjusted.*	1-99-(50%)	
PSc	The torque applied to the motor during braking in the opening phase is adjusted *	1-99-(50%)	
SEAL	The trigger time of the anti-crash device (Encoder) is adjusted during the normal speed phase*. 99: maximum sensitivity – 0: Minimum sensitivity	0-99-(0%)	
SEAr	The trigger time of the anti-crash device (Encoder) is adjusted during the braking phase*. 99: maximum sensitivity – 0: minimum sensitivity	0-99-(0%)	
LsL	Activated only with SErL:ON Logic. The activation time of the service light is adjusted.	1-240-(60s)	
IbrA	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 result in a danger.
Comply with regulations in force!**

LOGICS (L05)			
MENU	FUNCTION	DEFAULT	MEMO
<i>t c A</i>	The automatic closure is enabled or disabled On: enabled automatic closure Off: disabled automatic closure	(ON)	
<i>i b L</i>	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)	
<i>i b c A</i>	PP and PED controls are enabled or disabled during the TCA phase. On: PP and PED control units are disabled. Off: PP and PED control units are enabled.	(OFF)	
<i>S c L</i>	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 <i>t c A</i> :ON Off: rapid closure is disabled.	(OFF)	
<i>PP</i>	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)	
<i>P r E</i>	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)	
<i>L t c A</i>	During the TCA time, the blinker is enabled or disabled. On: Activated blinker. Off: De-activated blinker.	(OFF)	
<i>h e r</i>	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)	
<i>i b c A</i>	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)	
<i>E n c</i>	The Encoder is enabled or disabled. See section "Operating mode with enabled/disabled Encoder" On: Encoder enabled – The anti-crash sensor is activated. Off: Encoder disabled – The anti-crash sensor is deactivated.	(ON)	
<i>c u A r</i>	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	
<i>2 c h</i>	The second radio channel is enabled or disabled on terminals SCA (fig.2). On: SCA output, preset as second radio channel. The <i>S E r L</i> logic should be OFF. Off: AUX output can be preset as SCA, or by <i>S E r L</i> logic (the programming of a radio control in the RADIO 2CH menu allows for the pedestrian passage opening).	(OFF)	
<i>S E r L</i>	The service light function to output SCA (Fig.2) is enabled or disabled. On: At every operation, the contact is closed for the time preset with <i>t L 5</i> parameter Use the auxiliary relay to control the light. 2CH logic should be preset on OFF. Off: AUX output can be preset as SCA, or by 2CH logic.	(OFF)	
<i>t S t 1</i>	The test of photocells to PHOT O input is enabled or disabled. On: Test is enabled. If the test is negative, no operation is performed. Off: Test is disabled.	(OFF)	
<i>t S t 2</i>	The test of photocells to PHOT C input is enabled or disabled. On: Test is enabled. If the test is negative, no operation is performed. Off: Test is disabled.	(OFF)	

PhcL	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)	
SPn	The pickup function is enabled or disabled. On: Enabled pickup. At the beginning of every operation, the motor operates at maximum torque for 2 sec. Off: Start-ups are at braked speed for 2 seconds. Then the system speeds up to standard speed.	(ON)	
n Inu	The opening direction of the motor is selected (see Fig. 4): On: Right side motor mount Off: Left side motor mount	(OFF)	
rEN	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 (rAd i)

MENU	FUNCTION
PP	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.
2ch	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.
PEd	When this function is selected, the receiver awaits (Push) a transmitter code to be assigned to the PED 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.
clr	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.
rEr	The memory of the receiver is entirely erased. Confirmation for the operation is asked.

NUMBER OF CYCLES (nPRn)

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.

MAINTENANCE (PRc i)

This function allows to activate the indication of maintenance required after a certain number of operations, preset by the installer.
To activate and select the number of operations, proceed as follows:
Press the <PG> button, OFF is displayed, indicating that the function is disabled (default).
Select one of the numbers shown (from OFF to 100) by using the <+> and <-> keys . The figures express the value of hundreds of cycles (e.g.: the number 50 means 5000 operations).
Press OK to activate the function. The PROG message is displayed.
When the flashing light flashes for around 10 sec at end of operation, this means that maintenance operations are needed.

RESET (rE5)

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.

AUTOSET (RULto)

The learning of the system stroke and the operating torque adjustment are carried out.
See paragraph SELF-LEARNING

PASSWORD (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 the code from a protected control unit, enter the programming mode with the password and reset the code to the 0000 default value.

IF YOU LOOSE THE CODE, PLEASE CONTACT THE AUTHORISED SERVICE CENTER FOR THE TOTAL RESET OF THE CONTROL UNIT.

ATTENTION:

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

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.

- if braking is activated by setting parameter TSM from 0 to a higher value, a complete operation, from limit switch to limit switch, shall be performed without stops to allow for the gate stroke memorisation.

Once the stroke is stored in memory, the control unit will manage braking automatically in both opening and closing phases. Braking can be increased or decreased through parameter TSM.

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 ad normal speed for the gate stroke memorisation, also in the event of power failure.

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). The REM logics must be ON.

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.

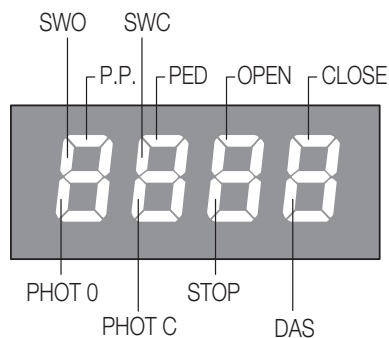
3 Within 10 seconds, press the hidden key of the new transmitter.

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.

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.



FUSES

- F1** Protection fuse of transformer
- F2** Output protection fuse of accessories and signals
- F3** Output protection fuse for motor and blinker

ERROR MESSAGES

Some messages that are displayed in the event of malfunctions are shown hereunder:

<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>OPP</i>	Obstacle detection	An obstacle present is indicated (anti-crash device).

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.