

BIOS2 24V

CONTROL UNIT FOR WING
GATES AT 24V



 **ALLMATIC**[®]

MADE IN ITALY

CE

1 - GENERAL WARNINGS

WARNING! Before installing the product, it is mandatory to read the document relating to **GENERAL SAFETY WARNINGS** supplied with the product. Document **6-1620001**.

The supplementary sheet can also be downloaded from www.allmatic.com.

2 - SELECTION OF THE MOTOR

WARNING! Before executing the learning of the strokes, the memorization of the transmitters and before performing any other setting, it is necessary to select the motorization in use, this allows to optimize the operation of BIOS2 24.

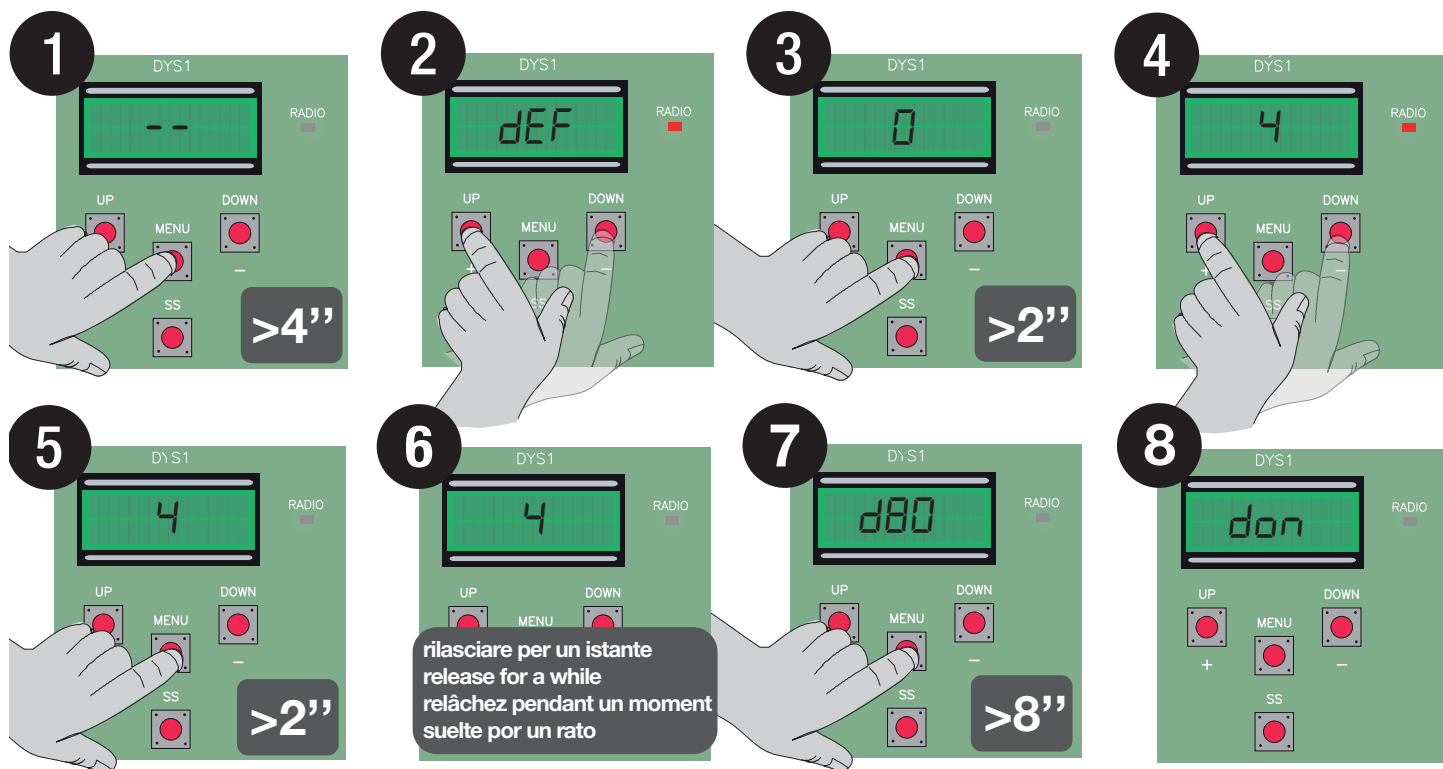
ACCESS TO THE ADVANCED MENU VOICE dE.F., select the value corresponding to the motor to be controlled and perform a reset by completing the countdown on the display. Refer to the table on page 18.

The procedure is as follows, in the example the KINEO 400 motor is selected (4):

WARNING! The procedure performs a restoration of the factory values causing the loss of any customizations. It does not affect the amplitude of the programmed strokes and the memorized transmitters.

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0	OTHER MOTORS (EXECUTE NECESSARY PERSONALIZATIONS)
1	XTILUS
2	INT VS
3	MINIART
4	KINEO 400



3 - PRODUCT DESCRIPTION

The control unit BIOS2 24V is suitable for the installations of 2 motor with direct current 24V and a maximum absorption of 10A. This device has an easy and intuitive functioning thanks to the display interface and 4 buttons. The control unit allows a precise regulation of all parameters. The control unit can memorize up to 1000 transmitters (external memory) with the step by step, partial opening, open and close functions. It is supplied with inputs for opening and closing photocells, safety edge (mechanical or resistive) and buttons for step by step, partial opening, open, close and stop. The outputs include a 24 Vac flashing light, 24Vac courtesy light/open automation light, 24 Vdc accessories power supply and an electrical lock 12 Vac 15 VA. The electrical lock is also available with the expansion card R1 (not supplied) with dry contact 230 Vac 5A max/30 Vdc 5A max. Buffer batteries use is available in case it would be necessary to ensure the temporary service in case of lack of power.

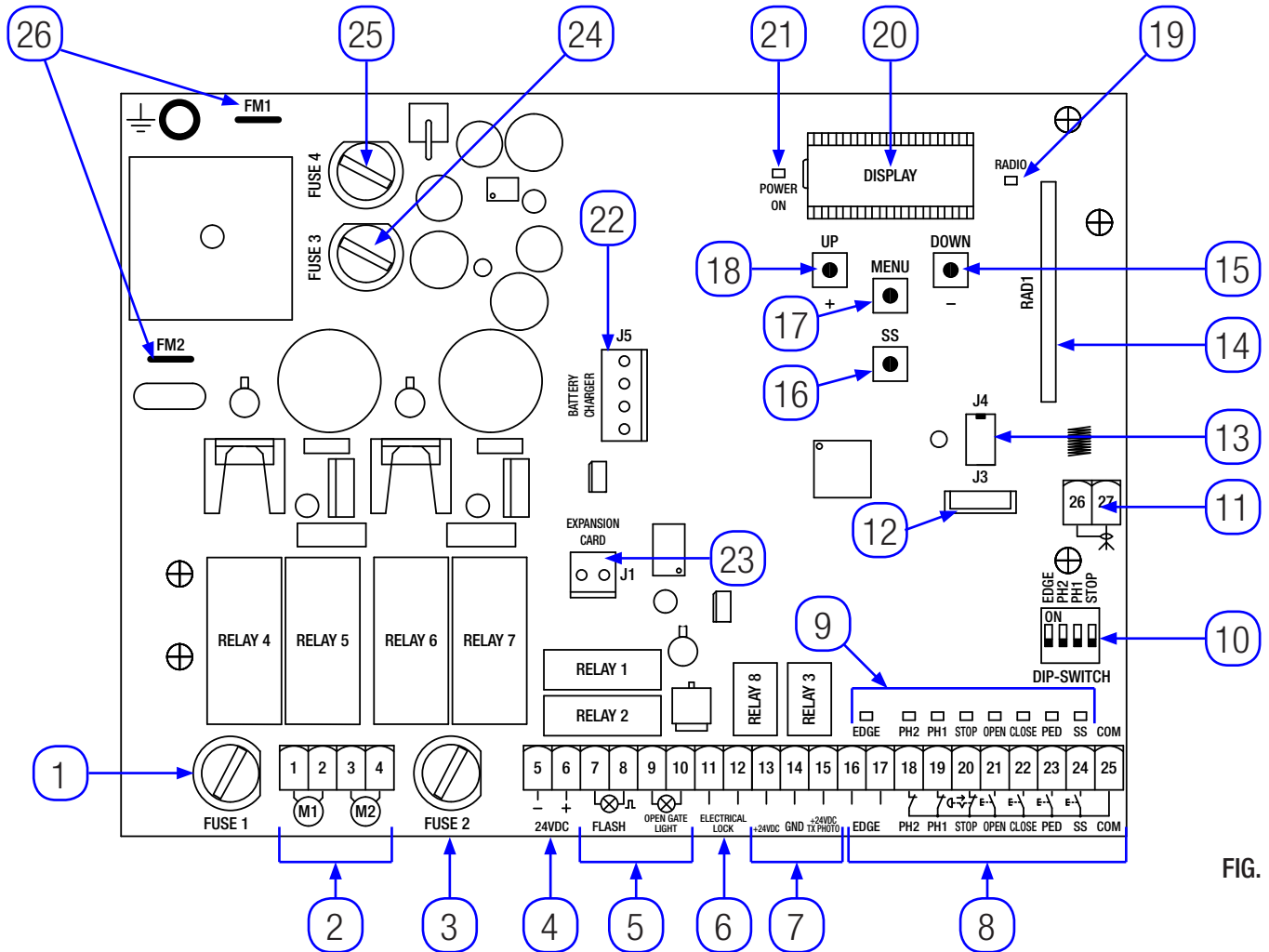


FIG. 1

3.1 - MAIN COMPONENTS / CONNECTIONS

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Fuse 1: T 10A fuse for motor protection. 2. Connection for motors. 3. Fuse 2: T 10A fuse for motor protection. 4. Connection for 24Vdc accessories. 5. Connection for 24Vac accessories (flashing light, courtesy light / open automation light). 6. Connection for electrical lock 12Vac 15VA. 7. Connection for 24Vdc photocells power supply. 8. Connection for command and safety devices. 9. Signaling Led for the inputs state. 10. DIP-SWITCH for safety devices. 11. Connection for antenna. 12. Connector for Bluetooth module. 13. Connector for external memory. | <ol style="list-style-type: none"> 14. Connector for radio module. 15. DOWN (-) button. 16. Step-by-Step (SS) button. 17. MENU button. 18. UP (+) button. 19. Signaling Led for the radio signal. 20. Display. 21. Led for the presence of the power supply. 22. Connector for the batteries charger card (24CBA). 23. Connector for optional R1 card. 24. Fuse 2: F200mA fuse for 24Vdc protection. 25. Fuse 3: T 2,5A fuse for 24Vac outputs protection. 26. Connection for transformer. |
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3.2 - MODELS AND TECHNICAL FEATURES

CODE	DESCRIPTION
12006661	BIOS2 24V control unit for two motors
60551000	Transformer 230 / 23 Vac 150VA
60551040	Transformer 230 / 23 Vac 300VA, for INT VS motors.
12006730	Bluetooth module
12000760	R1 card
12000780	Battery charger 24CBA card

Transformer power supply	230Vac 50-60Hz
Fuse for transformer protection	T 1A
BIOS2 24V power supply	24Vac 50-60Hz
Maximum power of the motor output	240W
Flashing light output	24Vac 25W
Courtesy light / Open automation light output	24Vac 25W
Electrical lock output	12Vac 15VA
24Vdc accessories power supply	24Vdc 5W
433MHz radio receiver	Rolling Code
Memorisable transmitters	1000
Operating temperature	-10°C +55°C

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3.3 - LIST OF THE SUGGESTED CABLES

The suggested cables for the connection of the various devices in a standard system are listed in the following list. The used cables must be suitable for the type of installation; for example, an H03VV-F type cable is recommended for indoor applications, while H07RN-F is suitable for outdoor applications.

Connection	Cable	Maximum length
Line for the power supply	3 x 1,5 mm ²	20 m *
Motor	2 x 1,5 mm ²	10 m *
Flashing light	2 x 0,5 mm ²	20 m
Courtesy light / Open automation light	2 x 0,5 mm ²	20 m
Electrical lock	2 x 1,0 mm ²	10 m
Photocells - transmitter	2 x 0,5 mm ²	20 m
Photocells - receiver	4 x 0,5 mm ²	20 m
Safety edge	2 x 0,5 mm ²	20 m
Key selector	4 x 0,5 mm ²	20 m

* If the cable is more than 10 m long, it must be of larger gauge and a safety grounding system must be installed near the automation unit.

3.4 - PRELIMINARY CHECKS

- The gate shall move frictionless.

Note: Gate features must be uniformed with the standards and laws in force. The door/gate can be automated only if it is in a good condition and if its conditions comply with the EN 12604 norm.

- The door/gate leaf should not have a pedestrian opening. In the opposite case it is necessary to take the appropriate steps, in accordance with EN 12453 norm (for instance: by preventing the operation of the motor when the pedestrian opening is opened, by installing a safety microswitch connected with the control panel).

- Must not generate points of entrapment (e.g. between the leaf of the opened gate and the fence).

- No mechanical stop shall be on top of the gate, since mechanical stops are not safe enough.

Note: the leaf must be fixed firmly on the hinges to the pillars, must not be flexible during the movement and must move without frictions.

Parts to install meeting the EN 12453 standard			
COMMAND TYPE	USE OF THE SHUTTER		
	Skilled persons (out of public area*)	Skilled persons (public area)	Unrestricted use
with manned operation	A	B	non possible
with visible impulses (e.g. sensor)	C or E	C or E	C and D, or E
with not visible impulses (e.g. remote control)	C or E	C and D, or E	C and D, or E
automatic	C and D, or E	C and D, or E	C and D, or E

* a typical example are those shutters which do not have access to any public way
A: Command button with manned operation (that is, operating as long as activated).
B: Key selector with manned operation.
C: Adjustable power of the motor.
D: Safety strips and/or other safety devices to keep thrust force within the limits of EN12453 regulation - Appendix A.
E: Photocells.

4 - ELECTRICAL CONNECTIONS

WARNING - Before making the connections, be sure that the control unit is not powered up.

DIP-SWITCH FOR SAFETY DEVICE: Set on "ON" to disable inputs EDGE, PH2, PH1 AND STOP. Eliminates the need to bridge the terminal board inputs.

WARNING - with the dip switch ON, the safety devices are disabled

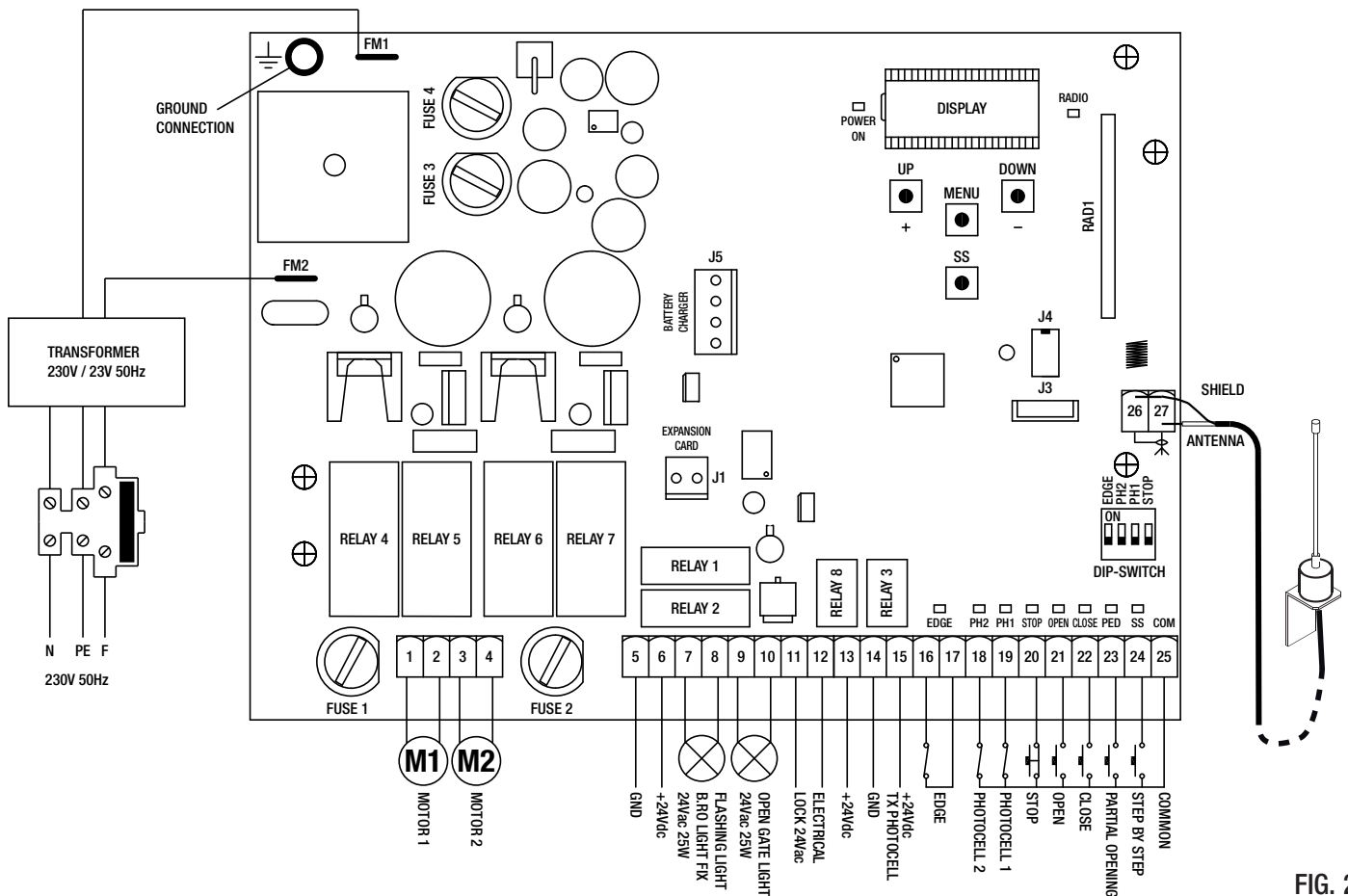
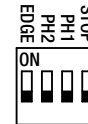


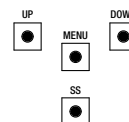
FIG. 2

4.1 - LIST OF TERMINAL BOARDS AND CONNECTORS

Number	Name	Description
1 - 2	M1	Connect the motor 1.

Number	Name	Description
3 - 4	M2	Connect the motor 2.
5 - 6	24VDC	24Vdc accessories power supply. WARNING - The control unit supplies up to a maximum of 200 mA (5W) for all the accessories at 24Vdc.
7 - 8	FLASH	Flashing light output at 24Vac. Use a flashing light without self flashing card 24Vac 25W max.
9 - 10	OPEN GATE LIGHT	Courtesy light / Open automation light output at 24Vac. Use a light 24Vac 25W max. The functioning of the auxiliary light and its activation time are managed from advanced items <i>F.L.Y.</i> and <i>E.c.Y.</i>
11-12	ELECTRICAL LOCK	Electrical lock output, 12Vac 15VA.
13	+24VDC	+24Vdc accessories power supply. Used for the receiver of the photocells.
14	GND	0Vdc accessories power supply. WARNING - The control unit supplies up to a maximum of 200 mA (5W) for all the accessories at 24Vdc.
15	+24VDC TX PHOTO	+24Vdc accessories power supply. Used for the transmitter of the photocells. This connection is necessary in case of use of the photocells test. It is possible to enable the photocells test from the advanced menu <i>E.P.h.</i>
16 - 17	EDGE	Safety edge input (NC contact). Select the type of the used safety edge (mechanical or resistive) through the advanced menu <i>E.d.i.</i> and the mode of intervention with the advanced menu <i>i.E.d.</i> WARNING - with DIP EDGE on "ON" the input is disabled.
18 - 25	PH2 - COM	Opening photocell input (NC contact). The photocell intervenes at any time during the opening of the automation system and stops immediately the movement; the automation system will continue the opening when the photocell beam is freed. In the event of intervention on closure (parameter <i>Ph.z.</i> = 0), the automation stops and, when the beam is freed, moves on opening. In the advanced item <i>Ph.z.</i> , it is possible to select the behaviour of the photocell. WARNING - with DIP PH2 on "ON" the input is disabled.
19 - 25	PH1 - COM	Closing photocell input (NC contact). The photocell intervenes at any time during the closing of the automation system, stops immediately and inverts the movement. The photocell doesn't intervene during the opening. In the advanced item <i>SP.h.</i> it is possible to select the behaviour of the photocell with the closed automation. WARNING - with DIP PH1 on "ON" the input is disabled.
20 - 25	STOP - COM	Connect the STOP command (NC contact). This input is classified as a safety device; the opening of the contact stops immediately the automation that remains blocked up to the restoring of the state of the input contact. WARNING - with DIP STOP on "ON" the input is disabled.
21 - 25	OPEN - COM	Connect the button for the OPEN command (NO contact).
22 - 25	CLOSE - COM	Connect the button for the CLOSE command (NO contact).
23 - 25	PED - COM	Connect the button for the PARTIAL OPENING command (NO contact).
24 - 25	SS - COM	Connect the button for the STEP-BY-STEP command (NO contact).
25	COM	Common for safety and command inputs.
26	SHIELD	Connect the antenna braiding.
27	ANTENNA	Connect the antenna
J1	EXPANSION CARD	Connector for the optional R1 card.
J3		Connector for the Bluetooth module.
J4		Connector for the external memory.
J5	BATTERY CHARGER	Connector for the battery charger card (24CBA).
FM1 - FM2		Connectors for the power supply from the transformer.
	GROUND CONNECTION	Ground connection.

5 - DISPLAY AND STATES OF THE CONTROL UNIT



By pressing the "DOWN" button it is possible to read on the display the following parameters.

DISPLAY	DESCRIPTION
State showing (- - , <i>OP</i> , <i>CL</i> , ...)	Description of the control unit state. Refer to the STATES OF THE CONTROL UNIT table for the description of the single states of functioning.
Maneuvers performed, e.g.: <i>02.0.</i> (unit) / <i>00 1</i> (thousand), that is 1020 cycles.	Maneuvers count: the display shows alternately the thousands (without dots) and the units (with dots).

5.1 - STATE OF THE CONTROL UNIT

DISPLAY	DESCRIPTION
- -	Standby - Automation closed or after the switch on of the control unit.
<i>OP</i>	Opening phase.
<i>CL</i>	Closing phase.
<i>SO</i>	Automation stopped by the user during the opening.
<i>SC</i>	Automation stopped by the user during the closing.
<i>HA</i>	Automation stopped by an external event (photocells, stop).
<i>oP</i>	Automation opened without automatic reclosing.
<i>PE</i>	Automation opened on partial opening position without automatic reclosing
- <i>tC</i>	Automation opened with auto reclosing; in the last 10 seconds the dash will be replaced by the countdown.
- <i>tP</i>	Automation opened on partial opening position with auto reclosing; in the last 10 seconds the dash will be replaced by the countdown.

5.2 - SIGNALLINGS DURING THE FUNCTIONING

DISPLAY	DESCRIPTION
<i>rAd</i>	Visualized during the learning of transmitters.
<i>don</i>	Visualized when a new transmitter is memorized or at the end of a reset
<i>Fnd</i>	Visualized when a key of a transmitter already memorized is stored.
<i>CLr</i>	Visualized when a transmitter is erased.
<i>LOP</i>	Visualized during the learning of strokes to indicate that the control unit is opening the automation.
<i>LCL</i>	Visualized during the learning of strokes to indicate that the control unit is closing the automation.
<i>L--</i>	Visualized during the learning of strokes if there is an intervention of safety devices.
<i>SEE</i>	Visualized when the control unit waits for a transmitter signal, during the function of viewing of the memory location.
<i>not</i>	Visualized when the transmitter is not stored on the memory, during the function of viewing of the memory location.
<i>toUt</i>	Visualized when the control unit exits from the function of viewing of the memory location for inactivity.
<i>Snd</i>	Visualized during the first coupling with the Bluetooth device.
<i>c --</i>	Visualized when the control unit is connected to a Bluetooth device.
<i>L --</i>	Visualized when the Bluetooth device is disconnecting from the control unit.
<i>POWER</i>	Visualized when the power supply is not enough.

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5.3 - MALFUNCTION SIGNALLINGS

DISPLAY	DESCRIPTION
<i>EiE</i>	Memory error: the external memory not installed or not recognised.
<i>EEx</i>	Memory error during the writing: the value x is a number from 1 to 6. In the event of the error, contact the technical assistance.
<i>EFO</i>	Impact sensor intervention.
<i>EEd</i>	Safety edge intervention.
<i>EPH</i>	Malfunctioning of photocells.
<i>Eth</i>	Thermal intervention to preserve the control unit.
<i>FUL</i>	Full external memory.
<i>Err</i>	Memory error during functions viewing memory location or cancellation of a single transmitter.
<i>EEL</i>	Electrical lock error: the restore after the evaluation of the error must be done manually. Press and hold the "DOWN" button, the display will show <i>rEL</i> and then <i>rE5</i> . Release the button.

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NOTE - The visualization of an error on the display, with the exception of the *EEL* error, persists until the "DOWN" button is pressed or until another command is given.

WARNING - the restore from an *EEx* error must be carried out through one of the 3 buttons of the control unit (UP, MENU or DOWN).

5.4 - SIGNALLING LED

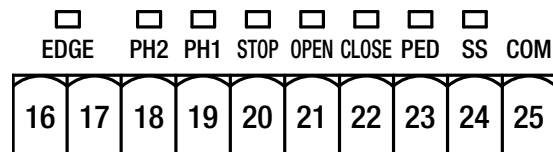


FIG. 3

LED	COLOUR	DESCRIPTION
EDGE	RED	Safety signalling, Led normally ON.
PH2	RED	Safety signalling, Led normally ON.
PH1	RED	Safety signalling, Led normally ON.
STOP	RED	Safety signalling, Led normally ON.
OPEN	GREEN	Led normally OFF. It is turned on when the button is pressed.
CLOSE	GREEN	Led normally OFF. It is turned on when the button is pressed.
PED	GREEN	Led normally OFF. It is turned on when the button is pressed.
SS	GREEN	Led normally OFF. It is turned on when the button is pressed.
RADIO	RED	Led ON with a radio transmission or interferences.
POWER ON	GREEN	Led normally ON. It shows the presence of the power supply.

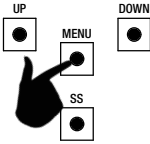
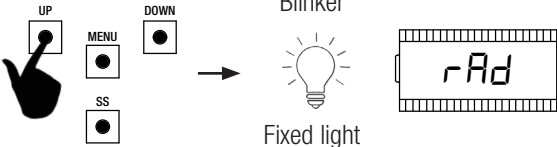

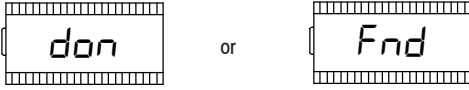

6 - REMOTE CONTROL LEARNING

The learning of a transmitter can be enabled with the "UP" button of the control unit or with the hidden key of a transmitter already memorized. The BIOS2 24V control unit can memorize up to 4 functions in as many keys of the remote control. During the learning procedure, described at paragraph 6.1, a single key is stored. So, it will be necessary to carry out up to 4 learnings for the assignment of all possible functions.

The functions will be assigned following the order below:

1. 1st memorized key: STEP-BY-STEP function.
2. 2nd memorized key: PARTIAL OPENING function.
3. 3rd memorized key: OPEN function.
4. 4th memorized key: CLOSE function.

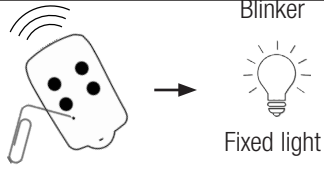

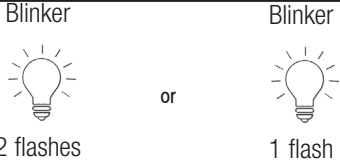
6.1 - LEARNING OF A TRANSMITTER

1.	Make sure that the board is out from any programming menus. To quit, press briefly the "MENU" button until the display shows the state of the control unit.	
2.	Press and release the "UP" button. The display shows <i>rAd</i> and the blinker will be turned on with a fixed light.	
3.	Press the key of the remote control to be memorised within 10 seconds.	
4.	If the memorisation has been successful, the display shows <i>don</i> or <i>Fnd</i> (transmitter already memorized).	
5.	After 2 seconds the display will show the memory location of the memorized transmitter (for example <i>235</i>).	
6.	To memorise another key of the remote control (or a new transmitter), repeat the procedure from the point 2.	

WARNING - after 10 seconds of inactivity, the control unit exits from the learning phase (the display shows *LoUt*).

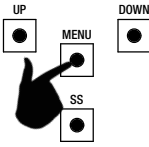
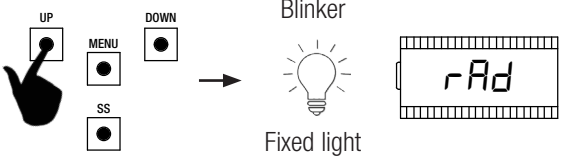

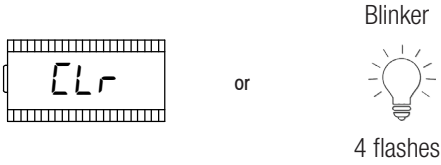

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6.2 - LEARNING WITH THE HIDDEN KEY OF A TRANSMITTER ALREADY MEMORIZED

1.	With the automation steady, with the aid of a clip press the hidden key of a transmitter already memorized, the flashing light lights on: now it is possible to memorize new keys or transmitters.	
2.	Press the key of the remote control to be memorised within 10 seconds.	
3.	If the memorisation has been successful, the blinker flashes 2 times (new transmitter) or 1 time (transmitter already memorized).	
4.	To memorise another key of the remote control (or a new transmitter), repeat the procedure from the point 1.	

WARNING - after 10 seconds of inactivity, the control unit exits from the learning phase (the display shows *LoUt*).

6.3 - CANCELLATION OF A SINGLE TRANSMITTER

1.	Make sure that the board is out from any programming menus. To quit, press briefly the "MENU" button until the display shows the state of the control unit.	
2.	Press and release the "UP" button or the hidden key of a transmitter already memorized. The display shows <i>rAd</i> and the flashing light will be turned on fixed.	
3.	Press at the same time the hidden key and the 1st key of the transmitter that you want to delete within 10 seconds.	
4.	If the deleting has been successful, the display shows <i>ELr</i> and the blinker flashes 4 times.	
5.	After 2 seconds the display will show the memory location of the deleted transmitter (for example <i>235</i>).	

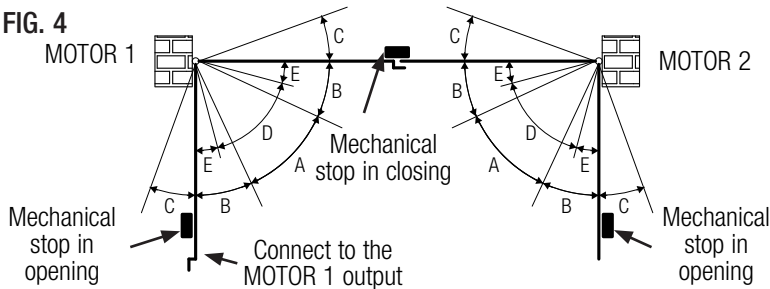
WARNING - after 10 seconds of inactivity, the control unit exits from the learning phase (the display shows *LoUt*).

7 - SETTING OF THE STROKE

NOTE - check with the advanced menu *dE.F.* (chapter 9) if the selected motor type is correct, before carrying out the learning.
At the first power up, it is necessary to carry out a learning of the stroke for the acquisition of the stroke length and the slowdowns.
After this procedure the installation is complete. To customize the automation, proceed as described in the chapter 8.

WARNING - For a correct functioning of the system, it is absolutely indispensable the use of mechanical stops in opening and closing.

FIG. 4



A = area at running speed.

B = area at slowdown speed.

C = overstroke zone (the movement is at slowdown speed, if the slowdown is enabled).

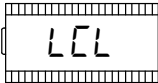
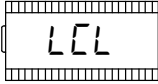


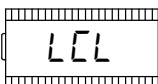
D = intervention zone of the amperometric sensor with movement inversion (detects the obstacle).

E = intervention zone of the amperometric sensor with the stop of the movement and the setting of the reached position as total closing/opening position (resync area, see *ii .P.* parameter).

7.1 - EASY SETTINGS OF THE STROKE

1.	<p>Connect to the MOTOR 1 output the wing which beats. Install an eventual electrical lock on this wing. MOTOR 1 is always activated first during opening phase and in second during closing phase. Carry out a check of the menus and, if needed, customize the settings before the learning of the stroke. The slowdowns will be those set in the menu, with the same percentage during both opening and closing ($L5i \neq P$). The second wing delay will be those set in the menu (default: $dLY = 2$).</p>	
2.	<p>Unlock the automation and move it to the middle of the stroke. Press at the same time the "UP" and "MENU" buttons for at least 5 seconds until the display shows LDP.</p>	
3.	<p>If the MOTOR 1 DOESN'T MOVE in opening, press the "DOWN" button to stop the learning. The display shows L--.</p>	
4.	<p>Press the "SS" button to restart the procedure: the MOTOR 1 moves in opening, at reduced speed. Reached the opening mechanical stop, the motor stops automatically. WARNING - if the motor doesn't stop automatically, press the "SS" button. In this phase the display shows LDP.</p>	
5.	<p>If the MOTOR 2 DOESN'T MOVE in opening, press the "DOWN" button to stop the learning. The display shows L--.</p>	
6.	<p>Press the "SS" button to restart the procedure: the MOTOR 2 moves in opening, at reduced speed. Reached the opening mechanical stop, the motor stops automatically. WARNING - if the motor doesn't stop automatically, press the "SS" button. In this phase the display shows LDP.</p>	

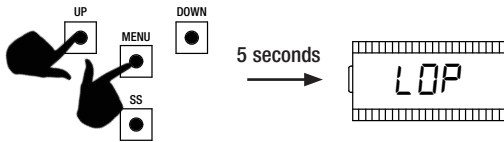
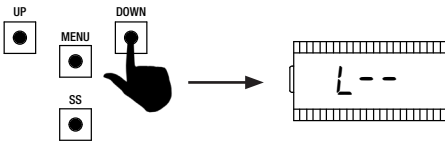
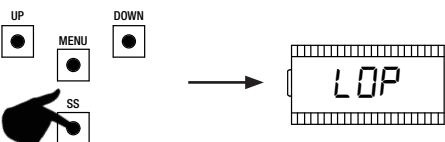
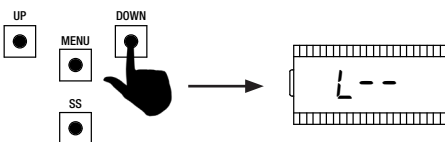
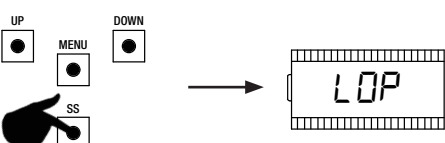

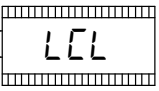
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7.	<p>The MOTOR 2 moves automatically in closing, at running speed. Reached the closing mechanical stop, the motor stops automatically. WARNING - if the motor doesn't stop automatically, press the "SS" button. In this phase the display shows <i>LCL</i>.</p>	
8.	<p>The MOTOR 1 moves automatically in closing, at running speed. Reached the closing mechanical stop, the motor stops automatically. WARNING - if the motor doesn't stop automatically, press the "SS" button. In this phase the display shows <i>LCL</i>.</p>	
9.	<p>The MOTOR 1 moves automatically in opening, at running speed. Reached the opening mechanical stop, the motor stops automatically. WARNING - if the motor doesn't stop automatically, press the "SS" button. In this phase the display shows <i>LOP</i>.</p>	
10.	<p>The MOTOR 2 moves automatically in opening, at running speed. Reached the opening mechanical stop, the motor stops automatically. WARNING - if the motor doesn't stop automatically, press the "SS" button. In this phase the display shows <i>LOP</i>.</p>	
11.	<p>The automation moves in closing with the second wing delay set into the menu <i>dLY</i> and with the slowdowns set into the menu <i>LSi</i>.</p>	


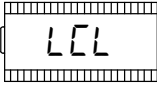




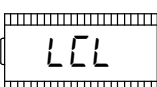
**WARNING - in the event of a safety device intervention, the learning is stopped and will appear on the display *L--*.
Press the "SS" button to start again the learning from the 4th point.**

NOTE - if the motors don't stop automatically during the learning, increase the value of the obstacle sensitivity and /or the obstacle sensitivity during slowdowns (menu *SEn* and *SEL*), see paragraph 8, and check that the intervention mode of the current sensor is suitable for the use as limit switch (menu *Sn.7.*), see paragraph 9.

7.2 - ADVANCED SETTINGS OF THE STROKE

1.	<p>Connect to the MOTOR 1 output the wing which beats. Install an eventual electrical lock on this wing. MOTOR 1 is always activated first during opening phase and in second during closing phase.</p> <p>Carry out a check of the menus and, if needed, customize the settings before the learning of the stroke.</p> <p>Be sure to have set the item menu $LSI = P$. The slowdowns should be set during the learning procedure and the amplitudes will be independent in the two directions.</p> <p>The second wing delay will be those set in the menu (default: $dLY = 2$).</p>	
2.	<p>Unlock the automation and move it to the middle of the stroke.</p> <p>Press at the same time the "UP" and "MENU" buttons for at least 5 seconds until the display shows LOP.</p>	
3.	<p>If the MOTOR 1 <u>DOESN'T MOVE</u> in opening, press the "DOWN" button to stop the learning. The display shows $L--$.</p>	
4.	<p>Press the "SS" button to restart the procedure: the MOTOR 1 moves in opening, at reduced speed.</p> <p>Reached the opening mechanical stop, the motor stops automatically.</p> <p>WARNING - if the motor doesn't stop automatically, press the "SS" button.</p> <p>In this phase the display shows LOP.</p>	
5.	<p>If the MOTOR 2 <u>DOESN'T MOVE</u> in opening, press the "DOWN" button to stop the learning. The display shows $L--$.</p>	
6.	<p>Press the "SS" button to restart the procedure: the MOTOR 2 moves in opening, at reduced speed.</p> <p>Reached the opening mechanical stop, the motor stops automatically.</p> <p>WARNING - if the motor doesn't stop automatically, press the "SS" button.</p> <p>In this phase the display shows LOP.</p>	
7.	<p>The MOTOR 2 moves automatically in closing, at running speed.</p> <p>When the automation reaches the position for the beginning of the slowdown, give a Step-by-Step command (SS).</p> <p>In this phase the display shows LCL.</p>	
8.	<p>The MOTOR 2 proceeds at slowdown speed.</p> <p>Reached the closing mechanical stop, the motor stops automatically.</p> <p>WARNING - if the motor doesn't stop automatically, press the "SS" button.</p> <p>In this phase the display shows LCL.</p>	

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9.	<p>The MOTOR 1 moves automatically in closing, at running speed. When the automation reaches the position for the beginning of the slowdown, give a Step-by-Step command (SS). In this phase the display shows <i>LCL</i>.</p>	
10.	<p>The MOTOR 1 proceeds at slowdown speed. Reached the closing mechanical stop, the motor stops automatically. WARNING - if the motor doesn't stop automatically, press the "SS" button. In this phase the display shows <i>LCL</i>.</p>	
11.	<p>The MOTOR 1 moves automatically in opening, at running speed. When the automation reaches the position for the beginning of the slowdown, give a Step-by-Step command (SS). In this phase the display shows <i>LOP</i>.</p>	
12.	<p>The MOTOR 1 proceeds at slowdown speed. Reached the opening mechanical stop, the motor stops automatically. WARNING - if the motor doesn't stop automatically, press the "SS" button. In this phase the display shows <i>LOP</i>.</p>	
13.	<p>The MOTOR 2 moves automatically in opening, at running speed. When the automation reaches the position for the beginning of the slowdown, give a Step-by-Step command (SS). In this phase the display shows <i>LOP</i>.</p>	
14.	<p>The MOTOR 2 proceeds at slowdown speed. Reached the opening mechanical stop, the motor stops automatically. WARNING - if the motor doesn't stop automatically, press the "SS" button. In this phase the display shows <i>LOP</i>.</p>	
15.	<p>The automation moves in closing with the second wing delay set into the menu <i>dLY</i> and with the slowdowns set.</p>	

WARNING - in the event of a safety device intervention, the learning is stopped and will appear on the display *L--*. Press the "SS" button to start again the learning from the 4th point.

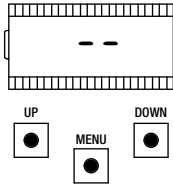
NOTE - if the motors don't stop automatically during the learning, increase the value of the obstacle sensitivity and /or the obstacle sensitivity during slowdowns (menu *SEn* and *SEL*), see paragraph 8, and check that the intervention mode of the current sensor is suitable for the use as limit switch (menu *Sn.i.*), see paragraph 9.

8 - CHANGE PARAMETERS - BASIC MENU

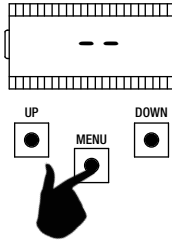
It is possible to access a BASIC MENU to change the main parameters of the control unit.
To enter the menu, proceed as described below.

WARNING - after 2 minutes of inactivity, the control unit exits automatically from the menu.

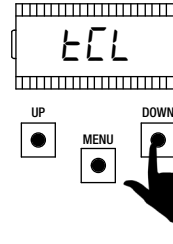
Example of use and modify in the BASIC MENU



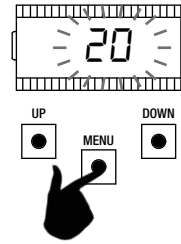
Make sure that the board is out from any programming menus (press briefly the "MENU" button).



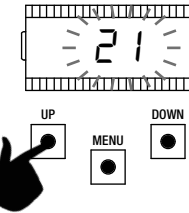
To enter the basic menu, press and hold the "MENU" button for at least 1 second.



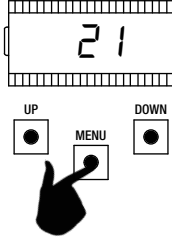
Use the "UP" and "DOWN" buttons to move inside the items of the menu.



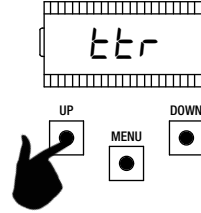
To enter the item, press and hold the "MENU" button for at least 1 second until the value blinks.



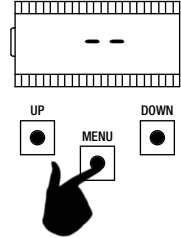
Use the "UP" and "DOWN" buttons to change the value.



To save the value, press and hold the "MENU" button for at least 1 second.
To quit without saving, press briefly the "MENU" button.



Use the "UP" and "DOWN" buttons to move inside the items of the menu.



To quit, press briefly the "MENU" button.

	PARAMETERS	DESCRIPTION	DEFAULT CUSTOM	MIN	MAX	UNIT
1	tCL	Auto reclosing time (0 = disabled).	0	0	900	s
2	ttr	Auto reclosing time after transit (0 = disabled).	0	0	30	s
3	SEn	Obstacle sensitivity with running speed (0 = disabled).	50	0	100	%
4	SEL	Obstacle sensitivity during slowdowns (0 = disabled).	70	0	100	%
5	SPn	Running speed.	100	50	100	%
6	SPL	Slowdowns speed	50	10	100	%
7	Sbs	SS configuration 0 = normal (OP-ST-CL-ST-OP-ST...) 1 = alternated STOP (OP-ST-CL-OP-ST-CL...) 2 = alternated (OP-CL-OP-CL...) 3 = condominium – timer 4 = condominium with immediate auto reclosing	0	0	4	
8	blt	After black-out 0 = no action 1 = closing	0	0	1	

	PARAMETERS	DESCRIPTION	DEFAULT CUSTOM	MIN	MAX	UNIT
9	<i>dLY</i>	Second wing delay.	2	0	300	s
10	<i>LSI</i>	Amplitude of slowdown. P = personalized during learning. 0...100% = percentage of stroke.	15	0	100	%
11	<i>ASL</i>	Anti slipping / Extra time.	0	0	300	s
12	<i>nit</i>	Number of motors: 1 = 1 motor. 2 = 2 motors.	2	1	2	

NOTE - the parameters highlighted in grey depend on the selected motor. In the table are reported the data of the CUSTOM motor. For more information, refer to chapter 12.

1. AUTO RECLOSING TIME $\epsilon\epsilon\epsilon$

Active when the automation is in the completely open position, the automation automatically closes after $\epsilon\epsilon\epsilon$ seconds. In this phase the display shows $-\epsilon\epsilon$ with the blinking dash, that during the last 10 seconds will be replaced by the count down. An opening command or the photocells intervention restarts the counting.

2. AUTO RECLOSING TIME AFTER TRANSIT $\epsilon\epsilon\tau$

If in the opening phase or in the completely open position the beam of the photocells is obscured and freed, the automation automatically closes after $\epsilon\epsilon\tau$ seconds when the completely open position is reached. In this phase the display shows $-\epsilon\epsilon$ with the blinking dash, that during the last 10 seconds will be replaced by the count down.

3. OBSTACLE SENSITIVITY WITH RUNNING SPEED $5E\tau$

Adjust the obstacle sensitivity to ensure a correct functioning of the automation, it must stop if there is an obstacle but also it must ensure the complete movement in the worst conditions (exp. winter, hardening of motors, etc). After the adjustment of this parameter it is recommended to perform a complete movimentation (opening and closing) before trying the obstacle detection.

Lower values correspond to a greater thrust on the obstacle.

The intervention for obstacle stops the automation and makes a short inversion of the movement.

4. OBSTACLE SENSITIVITY DURING SLOWDOWNS $5EL$

Adjust the obstacle sensitivity during the slowdown to ensure a correct functioning of the automation, it must stop if there is an obstacle but also it must ensure the complete movement in the worst conditions (exp. winter, hardening of motors, etc). After the adjustment of this parameter it is recommended to perform a complete movimentation (opening and closing) before trying the obstacle detection.

Lower values correspond to a greater thrust on the obstacle.

The intervention for obstacle stops the automation and makes a short inversion of the movement.

5. RUNNING SPEED $5P\tau$

Adjust the running speed to ensure a correct functioning of the automation. It is possible to adjust the percentage of speed between 50% and 100%.

WARNING - after the amendment of this parameter, it is necessary to carry out a new setting of the strokes.

6. SLOWDOWNS SPEED $5PL$

Adjust the slowdowns speed to ensure a correct functioning of the automation. It is possible to adjust the percentage of speed between 10% and 100% of the running speed $5P\tau$.

WARNING - after the amendment of this parameter, it is necessary to carry out a new setting of the strokes.

7. STEP BY STEP CONFIGURATION (SS) $5b5$

It is possible to set 5 different working modes for the SS command:

- $5b5 = 0$ normal (AP-ST-CH-ST-AP-ST-CH-...).
Typical functioning of Step by Step. During the movement a SS command stops the automation.
- $5b5 = 1$ alternated STOP (AP-ST-CH-AP-ST-CH-...).
Alternated functioning with STOP during the opening. During the opening phase a SS command stops the automation.
- $5b5 = 2$ alternated (AP-CH-AP-CH-...).
The user cannot stop the automation during the movement with a SS command.
A SS command during the movement inverts the movement.
- $5b5 = 3$ condominium – timer.
A SS command only opens the automation. When the automation is completely open, if the command persists the control unit will wait until the opening of the contact before beginning the countdown of the automatic reclosing (if enabled), another SS command in this phase will restart the countdown of the automatic reclosing.
- $5b5 = 4$ condominium with immediate auto reclosing.
Like condominium – timer (previous point) but during the countdown a SS command will close the automation.

8. AFTER BLACK-OUT $b\epsilon\epsilon$

When the control unit switches on after a black-out, the behaviour of the control unit depends on the parameter $b\epsilon\epsilon$:

- $b\epsilon\epsilon = 0$ no action – when the control unit turns on the automation doesn't move until the first command. The first movement is an opening.
- $b\epsilon\epsilon = 1$ closing – at the turning on of the control unit it will perform a closing.

9. SECOND WING DELAY dLY

This is the setting of the second wing delay to ensure a correct working.

10. AMPLITUDE OF SLOWDOWN LSI

With this parameter it is possible to adjust the amplitude of the slowdown and eventually disable it ($LSI = 0$). If you need more precise or different slowdown between opening and closing it is possible to set the parameter LSI on P (personalized) and perform an advanced learning of strokes providing also the beginning of slowdowns during the learning.

11. ANTI SLIPPING / EXTRA TIME ASL

This parameter is used if the motor slips, the control unit adds ASL seconds to the movement, to ensure a complete movement of the automation also in the worst conditions.

12. NUMBER OF MOTORS n_{mL}

This parameter is used to set the number of motors: the learning operations and the functionality will be modified depending on this parameter.

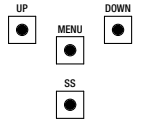
9 - CHANGE PARAMETERS - ADVANCED MENU

This menu allows a more detailed setting of some parameters.

To enter the ADVANCED MENU, press and hold the "MENU" button for at least 5 seconds.

To change the parameters, proceed as described for the BASIC MENU.

WARNING - after 2 minutes of inactivity, the control unit exits automatically from the menu.



	PARAMETERS	DESCRIPTION	DEFAULT CUSTOM	MIN	MAX	UNIT
1	$S_{n.L.}$	Intervention mode of the current sensor: 0 = disabled. 1 = complete (end of the movement and obstacle). 2 = only obstacle detection in any point of the stroke. 3 = only end of the movement in any point of the stroke.	1	0	3	
2	$r_{i.A.}$	Amplitude of the resync area.	60	0	100	
3	$S_{i.t.}$	Intervention time of the current sensor.	2	1	10	x 100ms
4	$S_{d.t.}$	The disabling time of the current sensor during the start of the motor.	15	0	30	x 100ms
5	$U_{r.A.}$	Acceleration ramp amplitude: 0...20 = ramp amplitude. $55r$ = single step at 50% of the running speed. ² $85r$ = single step at 100% of the running speed. ²	10	0	20	x 35ms
6	$d_{r.A.}$	Deceleration ramp amplitude.	10	0	20	x 35ms
7	$S_{P.h.}$	Functioning of closing photocell (PH1) moving from closed: 0 = check PH1. 1 = the automation opens also with PH1 obscured.	1	0	1	
8	$P_{h.2.}$	Functioning of opening photocell PH2 0 = enabled in opening and closing. 1 = enabled only in opening.	0	0	1	
9	$t_{P.h.}$	Photocells test: 0 = disabled. 1 = enabled PH1. 2 = enabled PH2. 3 = enabled PH1 and PH2.	0	0	3	
10	$E_{d.L.}$	Safety edge type: 0 = contact (NC). 1 = resistive (8k2).	0	0	1	
11	$i_{E.d.}$	Operation mode of safety edge: 0 = working only in closing with inversion of movement. 1 = stops the automation (both opening and closing) and free the obstacle (short inversion).	0	0	1	
12	$t_{E.d.}$	Safety edge test: 0 = disabled. 1 = enabled.	0	0	1	
13	$L_{P.o.}$	Partial opening.	30	0	100	%

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	PARAMETERS	DESCRIPTION	DEFAULT CUSTOM	MIN	MAX	UNIT
14	<i>tP.C.</i>	Auto reclosing time from partial opening (0 = disabled).	0	0	900	s
15	<i>FP.r.</i>	Blinker output mode: 0 = fix. 1 = blinking.	1	0	1	
16	<i>tP.r.</i>	Pre-flashing time (0 = disabled).	0	0	10	s
17	<i>FC.y.</i>	Courtesy ligh settings: 0 = at the end of the movement for a <i>tC.y.</i> time. 1 = on if the automation is not closed + <i>tC.y.</i> time. 2 = on if the courtesy light timer (<i>tC.y.</i>) is not expired. 3 = open automation light on/off. 4 = open automation light with proportional flashing.	0	0	4	
18	<i>tC.y.</i>	Courtesy light time.	180	0	900	s
19	<i>dE.A.</i>	Dead-man: 0 = disabled. 1 = enabled.	0	0	1	
20	<i>SE.r.</i>	Threshold of cycles for assistance request. Once the limit is reached the next cycles will be done with fast blinking (only if <i>FP.r.</i> enabled). 0 = disabled.	0	0	100	x 1000 cicli
21	<i>SE.F.</i>	Continuous blinking for assistance request (done only with closed automation): 0 = disabled. 1 = enabled.	0	0	1	
22	<i>HA.o.</i>	Water-hammer in opening phase (0 = disabled).	0	0	100	x 100ms
23	<i>HA.c.</i>	Water-hammer in closing phase (0 = disabled).	0	0	100	x 100ms
24	<i>EL.i.</i>	Mode of use of the electrical lock: 0 = disabled or not installed. 1 = enabled without the preventive activation. 2 = enabled with the preventive activation. 3 = enabled and set as electromagnetic lock.	0	0	3	
25	<i>rl.i.</i>	Mode of use of the R1 output (plug-in): 0 = output not used. 1 = electrical lock (copy of the control unit output). 2 = courtesy light (copy of the control unit output).	0	0	1	
26	<i>iP.r.</i>	Pressure of the motor in closed position, anti-wind function.	0	0	480	min
27	<i>iR.E.</i>	Function for the mechanical relaxation of the motor.	0	0	10	x 50ms
28	<i>EC.o.</i>	ECOMODE function (0 = disabled).	0	0	1	
29	<i>dE.F.</i>	Restore default settings depending on the motor type: 0 = CUSTOM. 1 = XTILUS. 2 = INT VS. 3 = MINIART. 4 = KINEO 400.	0	0	4	
30	<i>tr.S.</i>	Viewing of the memory location for a single transmitter.				
31	<i>tr.C.</i>	Cancellation of a single transmitter.				
32	<i>tr.F.</i>	Cancelling all transmitters. Enter to modify the parameter and then keep pressed the "MENU" button, a count down appears that ends with <i>don</i> on the display.				
33	<i>Si.d.</i>	First coupling between Bluetooth device and control unit.				

NOTE - the parameters highlighted in grey depend on the selected motor. On the table are reported the data of the CUSTOM motor. For more information, refer to chapter 12.

1. MODE OF THE SENSOR INTERVENTION *Sn.i.*

It is possible to select 4 intervention types for the current sensor that detect the motor blocked:

- *Sn.i.* = 0 sensor is disabled.
- *Sn.i.* = 1 complete functioning: intervention for obstacle detection in the central zone of the stroke and intervention for the ends of the movement in the resync areas (see *iR.A.* parameter).

- $S_{n,i} = 2$ the sensor intervenes only for obstacle detection in any position.
- $S_{n,i} = 3$ the sensor intervenes only as end of the movement in any position.

2. AMPLITUDE OF THE RESYNC AREA $\bar{r}.A.$

With this parameter it is possible to adjust the amplitude of the resync area and eventually disable it ($\bar{r}.A. = 0$). In this area, the intervention of the current sensor stops the movement and set the reached position as a full closed / open position. The value 100 corresponds to the 25% of the complete stroke of the motor.

3. INTERVENTION TIME OF THE SENSOR $S_i.t.$

Time after which intervenes the sensor for the motor blocked detection (current sensor) with an obstacle.

4. DISABLING TIME DURING THE START OF THE MOTOR $S_d.t.$

Time in which the current sensors is disabled during the start of the motor.

5. ACCELERATION RAMP $U_r.A.$

This parameter allows to set the acceleration ramp amplitude during the start of the motor. Higher is the value and longer will be the ramp. With $U_r.A. = 0$, the ramps are disabled and the motor starts directly at the running speed or at the slowdown speed, depending on the position during the stroke.

In addition to the numerical values, there are 2 additional options:

- $55.r.$ - the motor starts at the 50% of the running speed for 0,6 seconds.
- $100.r.$ - the motor starts at the 100% of the running speed for 0,6 seconds.

6. DECELERATION RAMP $d_r.A.$

This parameter allows to set the deceleration ramp amplitude from the running speed to the slowdown speed. Higher is the value and longer will be the ramp.

7. FUNCTIONING OF PH1 FROM CLOSED POSITION $S_{P,h.}$

The closing photocell has the following functioning:

- Closing: immediate inversion of the movement.
- Opening from an intermediate position: no intervention.
- Opening from closed position:
 - $S_{P,h.} = 0$ the automation doesn't move if PH1 beam is cut.
 - $S_{P,h.} = 1$ the automation moves while PH1 beam is cut.

8. FUNCTIONING OF PH2 $P_{h,2.}$

The opening photocell has the following functioning:

- Opening: stops the movement and waits until the beam is freed, then moves in opening.
- Closing:
 - $P_{h,2.} = 0$ stops the movement and waits until the beam is freed, then moves in opening.
 - $P_{h,2.} = 1$ no intervention.

9. PHOTOCELLS TEST $t_{P,h.}$

By enabling this function, before each movement starting from steady automation, the control unit does a functional check of the photocells. The check will not be done in case of fast movement after the intervention of a safety device. Follow paragraph 4.1 for the connections of the photocells.

10. SAFETY EDGE TYPE $E_{d,i.}$

The control unit can work with two different types of safety edges:

- $E_{d,i.} = 0$ mechanical with normally closed contact.
- $E_{d,i.} = 1$ resistive edge 8,2K Ω .

11. OPERATION MODE OF SAFETY EDGE $iE.d.$

To allow the installation of the safety edges in both the directions of movements, it is possible to choose 2 different functionings:

- $iE.d. = 0$ only in closing with total inversion of the movement.
- $iE.d. = 1$ both directions of movements, stop and short inversion to free the obstacle.

12. SAFETY EDGE TEST $tE.d.$

By enabling this function the control unit does a functional check of the safety edge. This function is used if the edge connected to the control unit has an electronic self test (exp. radio edge R.CO.O). Connect the test contact of the edge to the power supply of the transmitter of the photocells (paragraph 4.1) and enable the self test with low voltage 0Vdc (for the compatibility follow the instruction of the safety edge with the electronic self test).

13. PARTIAL OPENING $L.P.o.$

Partial opening can be performed only starting from a closed position. The parameter sets the opening like a percentage of the total stroke.

14. AUTO RECLOSING TIME FROM PARTIAL OPENING $tP.c.$

Active when the automation is in the partial opening, it automatically closes after $tP.c.$ seconds. In this phase the display shows $-tC$ with the blinking dash, that during the last 10 seconds will be replaced by the count down.

15. FLASHING LIGHT OUTPUT MODE $FP.r.$

It is possible to choose 2 different functionings for the blinker output:

- $FP.r. = 0$ fixed output. It will be necessary to connect a self flashing blinker (B.RO LIGHT 24 Vac).
- $FP.r. = 1$ flashing light output. It will be necessary to connect a fix light blinker (B.RO LIGHT FIX 24 Vac).

16. PRE-FLASHING TIME $tP.r.$

Pre-flashing before each movement in both directions, $tP.r.$ seconds of pre-flashing.

17. COURTESY LIGHT SETTINGS $FC.y.$

The control unit has 4 different functionings for the courtesy light:

- $FC.y. = 0$ the light switches off at the end of a movement after $tC.y.$ seconds.
- $FC.y. = 1$ the light switches off only with closed automation after $tC.y.$ seconds $tC.y.$
- $FC.y. = 2$ lighted on for $tC.y.$ seconds from the beginning of a movement, independently on the conditions of the automation (the light could switch off before the end of the movement).

- $FL.Y. = 3$ open automation light - the light switches off immediately when the automation reaches the closed position.
- $FL.Y. = 4$ open automation light with proportional blinking:
 - Opening: slow blinking.
 - Closing: fast blinking
 - Opened: light on
 - Closed: light off.
 - Stopped: 2flash + long wait + 2flash + long wait + ...

18. COURTESY LIGHT TIME $EL.Y.$

Activation time of the courtesy light.

19. DEAD MAN $dE.R.$

During the DEAD MAN functioning mode the automation moves only with a permanent command.

The enabled commands are OPEN and CLOSE. SS and PED are disabled. During the dead man functioning all the automatic movements are disabled, like short or total inversions. All safety devices are disabled except for STOP.

20. SETTING THE CYCLES THRESHOLD FOR ASSISTANCE REQUEST $SE.r.$

It is possible to set a number of cycles before the request of assistance. Once the limit is reached, the next cycles will be done with a fast blinking (only if $FP.r. = 1$).

21. CONTINUOUS FLASHING LIGHT FOR ASSISTANCE REQUEST $SE.F.$

Once the limit $SE.F.$ is reached the flashing light will blink also with the automation closed to show the request of assistance.

22. WATER-HAMMER IN OPENING PHASE $HR.o.$

This function is used with an electrical lock that has to be enabled by the menu $EL.r.$. The gate presses briefly on the mechanical stop to allow the disengagement of the electrical lock before an opening movement, starting from a closed gate. By the menu it is possible to set the duration of the pressure from a minimum of 0,1s to a maximum of 10s.

23. WATER-HAMMER IN CLOSING PHASE $HR.c.$

This function is used with an electrical lock that has to be enabled by the menu $EL.r.$. When the gate reaches the closing mechanical stop, the control unit perform a strong pressure, to ensure the locking of the electrical lock. By the menu it is possible to set the duration of the pressure from a minimum of 0,1s to a maximum of 10s.

24. MODE OF USE OF THE ELECTRICAL LOCK $EL.r.$

This parameter allows to select the functioning of the ELECTRICAL LOCK output:

- $EL.r. = 0$ electrical lock disabled or not installed.
- $EL.r. = 1$ the electrical lock will be enabled in the same time of the motors.
- $EL.r. = 2$ the electrical lock will be enabled 1,5s before the motors.
- $EL.r. = 3$ electromagnetic lock: the lock will be enabled only with the automation in the totally closed position. With an opening command the lock will be disabled. During the function "pressure of the motor in closed position", the electromagnetic lock will be disabled.

WARNING - with the electromagnetic lock it is absolutely necessary the use of the R1 card.

25. MODE OF USE OF THE R1 OUTPUT $r1.r.$

This parameter allows to select the functioning of the R1 card (optional):

- $r1.r. = 0$ the output is disabled.
- $r1.r. = 1$ electrical lock: the NO contact (without voltage) of the R1 card has the same functioning of the output ELECTRICAL LOCK.
- $r1.r. = 2$ courtesy light: the NO contact (without voltage) of the R1 card has the same functioning of the output OPEN GATE LIGHT.

26. PRESSURE OF THE MOTOR IN CLOSED POSITION, ANTI-WIND FUNCTION $rP.r.$

This function is used to keep the pressure of the motors on the mechanical stop, performed only with closed automation. The control unit performs 1 minute of closing every $rP.r.$ minutes to keep the pressure on the mechanical stops (for example to compensate the wind).

27. MECHANICAL RELAXATION $r.r.E.$

Function for the mechanical relaxation of the motor: it is useful on those motors that have the unlock for the manual movement which can remain locked due to the pressure of the motor on the mechanical stop. When it arrives on the mechanical stop, opening or closing, the motor will do a short inversion of $r.r.E. \times 50ms$.

NOTE - with $rP.r.$ with function enabled (pressure of the motor in closed position), the mechanical relaxation is performed only on the first positioning on the mechanical stop.

28. ECOMODE FUNCTION $EC.o.$

This parameter allows to enable the ECOMODE function. See chapter 10.

29. RESTORE DEFAULT SETTINGS $dE.F.$

With the item of the menu $dE.F.$ it is possible to restore the default settings of the control unit. The reset will restore all the parameters of the base and advanced menu, but doesn't modify the learnt strokes.

Move to $dE.F.$ then press and hold the "MENU" button until the display shows a number (for example 0), then release the button.

Select the used motor with the "UP" and "DOWN" buttons:

- 0: CUSTOM
- 1: XTILUS
- 2: INT VS
- 3: MINIART
- 4: KINEO 400

Press and hold the "MENU" button until the number stops blinking, then release the button. Press and hold the "MENU" button, the display will show a count down $d00, d79, \dots, d0$ I don't release the button until the display shows $d0r$.

NOTE - to know the type of the selected motor, move on the item menu $dE.F.$: the display shows alternating the $dE.F.$ and the selected motor. If a parameter changes (that depends on the motor type, see chapter 12), on the display will also appear the letter c (for example $c 1$).

30. VIEWING OF THE MEMORY POSITION FOR A SINGLE TRANSMITTER $Er.5.$

With the item of the menu $Er.5.$ it is possible to view the memory location in which a transmitter is memorized.

To perform the function, move to $Er.5.$ and then confirm by pressing the "MENU" button. Keep pressed the "MENU" button until the display will show

5EE, then release the button.

At this point press a button of the memorized transmitter (it does not active any command). The display shows:

- the memory location for 2 seconds, if is memorized;
- the written *noE* for 2 seconds, if is not memorized.

After 2 seconds the display returns to the screen 5EE and it will be possible to perform this function with another transmitter.

To exit the function, press the "MENU" button. Otherwise, after 15 seconds without transmission, the control unit exits the function and shows the written *noE*.

31. CANCELLATION OF A SINGLE TRANSMITTER *E.r.C.*

With the item of the menu *E.r.C.* it is possible to delete a single transmitter from the memory.

To perform the function, move to *E.r.C.* and then confirm by pressing the "MENU" button. Keep pressed the "MENU" button until the display will show *0*, then release the button. Select the memory location of the transmitter. Press and hold the "MENU" button until the display will show *ELr*, then release the button.

To exit the function, press the "MENU" button. If the display shows the written *Err* there are problems with the memory (for example empty position or disconnected memory).

32. CANCELLING ALL THE TRANSMITTERS *E.r.F.*

With the item of the menu *E.r.F.* it is possible to erase all the transmitters learnt.

Move to *E.r.F.*, then keep pressed the "MENU" button until the display shows *0*, then release the button. Press again and keep pressed the "MENU" button, the display will show a count down *dB0,d79,...,d0* I do not release the button until the display shows *dB0*.

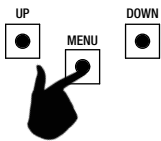
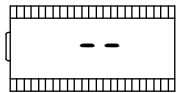
33. BLUETOOTH *5i.d.*

Item of the menu needed for the first coupling between an Android device and the control unit. Refer to the Help of the Android application for the connection procedure.

10 - ECOMODE

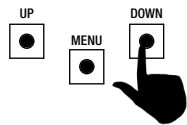
The ECOMODE function allows to increase the batteries life in the event of a black-out of the grid.

To enable the function:

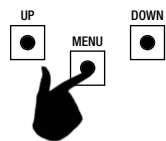
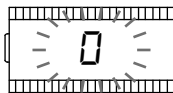


Make sure that the board is out from any programming menus (press briefly the "MENU" button).

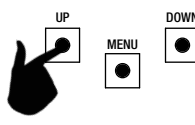
To enter the menu, press and hold the "MENU" button for at least 5 seconds.



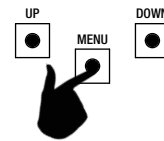
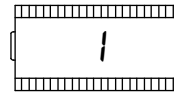
Use the "UP" and "DOWN" buttons to move inside the items of the menu. Select the item *EE.d.*



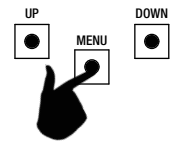
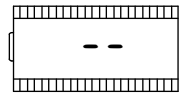
To enter the item, press and hold the "MENU" button for at least 1 second until the value blinks.



Use the "UP" and "DOWN" buttons to change the value.



To save the value, press and hold the "MENU" button for at least 1 second.



To quit, press briefly the "MENU" button.

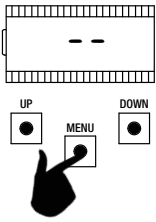
During the functioning with batteries and the ECOMODE enabled, the control unit activates the motor at reduced speed (50% of the nominal speed) and all the accessories, except to the electrical lock, are switched OFF.

WARNING - in this situation the safety devices ARE NOT ACTIVATED. For a greater safety, we suggest to move the automation on sight.

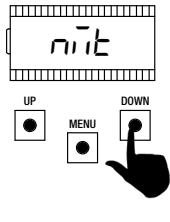
If during the the functioning with batteries, the power supply comes back, after 5 seconds (activation time of the accessories), the motor will be restored to the running speed and the safety devices will be again monitored.

11 - SETTING OF THE STROKE - SINGLE MOTOR

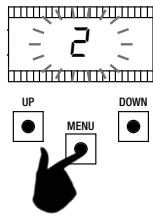
Select the functioning with a single motor:



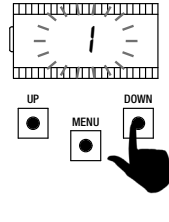
Make sure that the board is out from any programming menus (press briefly the "MENU" button).
To enter the menu, press and hold the "MENU" button for at least 1 second.



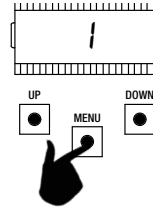
Use the "UP" and "DOWN" buttons to move inside the items of the menu.
Select the item $n1t$.



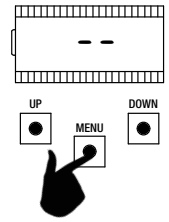
To enter the item, press and hold the "MENU" button for at least 1 second until the value blinks.



Use the "UP" and "DOWN" buttons to change the value.



To save the value, press and hold the "MENU" button for at least 1 second.



To quit, press briefly the "MENU" button.

WARNING - For a correct functioning of the system, it is absolutely indispensable the use of mechanical stops in opening and closing.

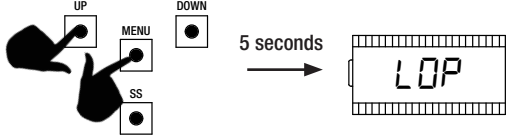
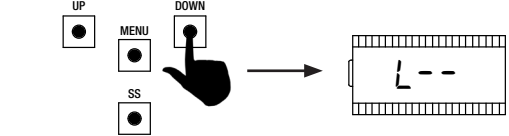
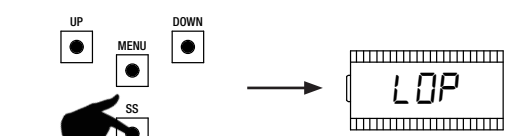

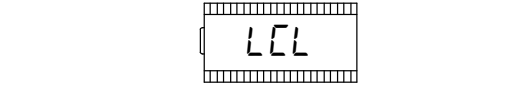


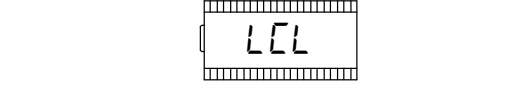
11.1 - EASY SETTINGS OF THE STROKE - SINGLE MOTOR

1.	<p>Connect the automation to the MOTOR 1 output and check to have set the $n1t = 1$. Carry out a check of the menus and, if needed, customize the settings before the learning of the stroke. The slowdowns will be those set in the menu, with the same percentage during both opening and closing ($L5i \neq P$).</p>	
2.	<p>Unlock the automation and move it to the middle of the stroke. Press at the same time the "UP" and "MENU" buttons for at least 5 seconds until the display shows $L0P$.</p>	
3.	<p>If the automation <u>DOESN'T MOVE</u> in opening, press the "DOWN" button to stop the learning. The display shows $L--$.</p>	
4.	<p>Press the "SS" button to restart the procedure: the automation moves in opening, at reduced speed. Reached the opening mechanical stop, the motor stops automatically. WARNING - if the motor doesn't stop automatically, press the "SS" button. In this phase the display shows $L0P$.</p>	
5.	<p>The automation moves automatically in closing, at running speed. Reached the closing mechanical stop, the motor stops automatically. WARNING - if the motor doesn't stop automatically, press the "SS" button. In this phase the display shows LCL.</p>	
6.	<p>The automation moves automatically in opening, at running speed. Reached the opening mechanical stop, the motor stops automatically. WARNING - if the motor doesn't stop automatically, press the "SS" button. In this phase the display shows $L0P$.</p>	
7.	<p>The automation moves in closing with the slowdowns set into the menu $L5i$.</p>	

**WARNING - in the event of a safety device intervention, the learning is stopped and will appear on the display L -- .
Press the "SS" button to start again the learning from the 4th point.**

NOTE - if the motors don't stop automatically during the learning, increase the value of the obstacle sensitivity and /or the obstacle sensitivity during slowdowns (menu 5E_n and 5E_L), see paragraph 8, and check that the intervention mode of the current sensor is suitable for the use as limit switch (menu 5_{n.r.}), see paragraph 9.

11.2 - ADVANCED SETTINGS OF THE STROKE - SINGLE MOTOR

1.	<p>Connect the automation to the MOTOR 1 output and check to have set the $n_{it} = 1$. Carry out a check of the menus and, if needed, customize the settings before the learning of the stroke. Be sure to have set the item menu $L5i = P$. The slowdowns should be set during the learning procedure and the amplitudes will be independent in the two directions.</p>	
2.	<p>Unlock the automation and move it to the middle of the stroke. Press at the same time the "UP" and "MENU" buttons for at least 5 seconds until the display shows LOP.</p>	
3.	<p>If the automation DOESN'T MOVE in opening, press the "DOWN" button to stop the learning. The display shows L -- .</p>	
4.	<p>Press the "SS" button to restart the procedure: the automation moves in opening, at reduced speed. Reached the opening mechanical stop, the motor stops automatically. WARNING - if the motor doesn't stop automatically, press the "SS" button. In this phase the display shows LOP.</p>	
5.	<p>The automation moves automatically in closing, at running speed. When the automation reaches the position for the beginning of the slowdown, give a Step-by-Step command (SS). In this phase the display shows LCL.</p>	
6.	<p>The automation proceeds at slowdown speed. Reached the closing mechanical stop, the motor stops automatically. WARNING - if the motor doesn't stop automatically, press the "SS" button. In this phase the display shows LCL.</p>	
7.	<p>The automation moves automatically in opening, at running speed. When the automation reaches the position for the beginning of the slowdown, give a Step-by-Step command (SS). In this phase the display shows LOP.</p>	
8.	<p>The automation proceeds at slowdown speed. Reached the opening mechanical stop, the motor stops automatically. WARNING - if the motor doesn't stop automatically, press the "SS" button. In this phase the display shows LOP.</p>	
9.	<p>The automation moves in closing with the slowdowns set.</p>	

**WARNING - in the event of a safety device intervention, the learning is stopped and will appear on the display L -- .
Press the "SS" button to start again the learning from the 4th point.**

NOTE - if the motors don't stop automatically during the learning, increase the value of the obstacle sensitivity and /or the obstacle sensitivity during slowdowns (menu 5E_n and 5E_L), see paragraph 8, and check that the intervention mode of the current sensor is suitable for the use as limit switch (menu 5_{n.r.}), see paragraph 9.

12 - DEFAULT VALUES

The BIOS2 24V control unit has the possibility to select the used motor. This allows to set, as defaults, some parameters for the optimal functioning of the motor.

Here below, the table of the parameters with the default values assigned that depend on the motor.

MENU	DISPLAY	SHORT DESCRIPTION	DEFAULT VALUES				
			CUSTOM	XTILUS	INT VS	MINIART	KINEO 400
BASIC	<i>SEn</i>	Obstacle sensitivity with running speed (0 = disabled).	50	45	35	60	40
BASIC	<i>SEL</i>	Obstacle sensitivity during slowdowns (0 = disabled).	70	75	60	60	50
BASIC	<i>SPn</i>	Running speed.	100	80	70	100	100
BASIC	<i>SPL</i>	Slowdowns speed.	50	40	60	50	50
BASIC	<i>ASL</i>	Anti slipping / Extra time.	0	15	15	15	15
ADVANCED	<i>Si t</i>	Intervention time of the current sensor.	2	2	2	2	2
ADVANCED	<i>Sdt</i>	Disabling time of the current sensor during the start of the motor.	15	15	25	15	15
ADVANCED	<i>UrA</i>	Acceleration ramp amplitude.	10	15	10	15	10
ADVANCED	<i>drA</i>	Deceleration ramp amplitude.	10	10	5	15	10
ADVANCED	<i>dEF</i>	Restore default settings.	0	1	2	3	4

NOTE - To know the type of the selected motor, move on the item menu *dE.F.*: the display shows in alternancethe selected motor number. If a parameter changes (that depends on the motor type), on the display will also appear the letter *c* (for example *c i*).

13 - WARRANTY

In compliance with legislation, the manufacturer's warranty is valid from the date stamped on the product and is restricted to the repair or free replacement of the parts accepted by the manufacturer as being defective due to poor quality materials or manufacturing defects. The warranty does not cover damage or defects caused by external agents, faulty maintenance, overloading, natural wear and tear, choice of incorrect product, assembly errors, or any other cause not imputable to the manufacturer. Products that have been misused will not be guaranteed or repaired. Printed specifications are only indicative. The manufacturer does not accept any responsibility for range reductions or malfunctions caused by environmental interference. The manufacturer's responsibility for damage caused to persons resulting from accidents of any nature caused by our defective products, are only those responsibilities that come under law.

14 - DISPOSAL OF THE PRODUCT

This product is an integral part of the automation, and therefore, they must be disposed of together. As for the installation operations, at the end of the life of this product, the dismantling operations must be performed by qualified personnel. This product is made from different types of materials: some can be recycled, others must be disposed of. Please inform yourselves on the recycling or disposal systems provided for by the laws in force in your area, for this category of product.



CAUTION! – some parts of the product can contain polluting or dangerous substances which, if dispersed in the environment, may cause serious harm to the environment and human health.

As indicated by the symbol at the side, it is forbidden to throw this product into domestic refuse. Therefore, follow the "separated collection" instructions for disposal, according to the methods provided for by local regulations in force, or redeliver the product to the retailer at the moment of purchase of a new, equivalent product.

CAUTION! – the regulations in force at local level may envisage heavy sanctions in case of abusive disposal of this product.

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