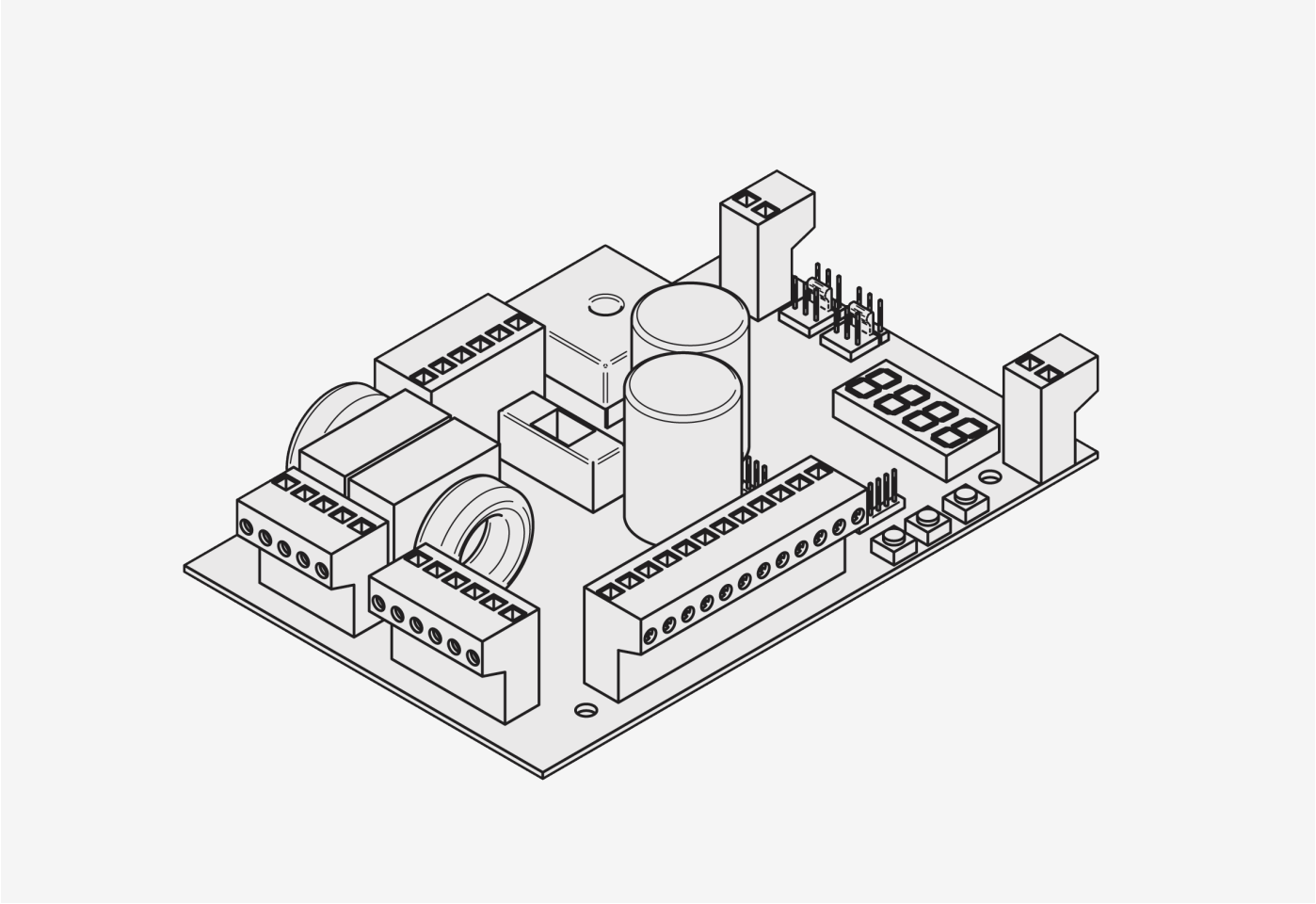

NET24N

Operating Instructions

DEA®

Downee

NET24N

Universal control panel for 24V operators
Operating instructions and warnings

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EN

1 WARNINGS SUMMARY

Read these warnings carefully; failure to respect the following warnings may cause risk situations.

⚠ **WARNING** Using this product under unusual conditions not foreseen by the manufacturer can create situations of danger, and for this reason all the conditions prescribed in these instructions must be respected.

⚠ **WARNING** **DEA** System reminds all users that the selection, positioning and installation of all materials and devices which make up the complete automation system, must comply with the European Directives 2006/42/CE (Machinery Directive), 2004/108/CE (electromagnetic compatibility), 2006/95/CE (low voltage electrical equipment). In order to ensure a suitable level of safety, besides complying with local regulations, it is advisable to comply also with the above mentioned Directives in all extra European countries.

⚠ **WARNING** Under no circumstances must the product be used in explosive atmospheres or surroundings that may prove corrosive and damage parts of the product.

⚠ **WARNING** To ensure an appropriate level of electrical safety always keep the 230V power supply cables apart (minimum 4mm in the open or 1 mm through insulation) from low voltage cables (motors power supply, controls, electric locks, aerial and auxiliary circuits power supply), and fasten the latter with appropriate clamps near the terminal boards.

⚠ **WARNING** All installation, maintenance, cleaning or repair operations on any part of the system must be performed exclusively by qualified personnel with the power supply disconnected working in strict compliance with the electrical standards and regulations in force in the nation of installation.

⚠ **WARNING** Using spare parts not indicated by **DEA** System and/or incorrect re-assembly can create risk to people, animals and property and also damage the product. For this reason, always use only the parts indicated by **DEA** System and scrupulously follow all assembly instructions.

⚠ **WARNING** Incorrect assessment of the impact forces can cause serious damage to people, animals or things. **DEA** System reminds the installer must verify that the impact forces, measured as indicated by the standard EN 12445, are actually below the limits set by the standard EN12453.

⚠ **WARNING** The compliance of the internal sensing obstacles device to requirements of EN12453 is guaranteed only if used in conjunction with motors fitted with encoders.

⚠ **WARNING** Any external security devices used for compliance with the limits of impact forces must be conform to standard EN12978.

WARNING In compliance with EU Directive 2002/96/EC on waste electrical and electronic equipment (WEEE), this electrical product should not be treated as municipal mixed waste. Please dispose of the product and bring it to the collection for an appropriate local municipal recycling.

2 PRODUCT DESCRIPTION

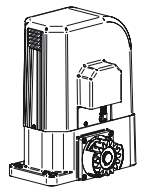
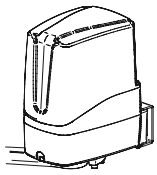
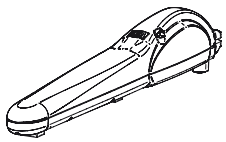
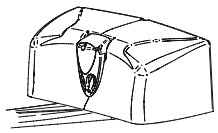
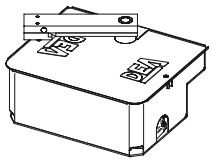
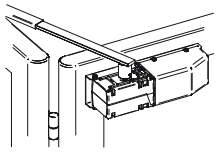
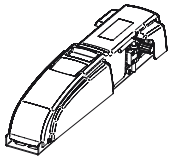
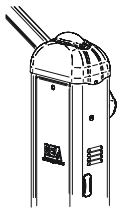
NET24N is a universal control panel for **DEA** System 1 or 2 24V operators automations with or without encoder.

The main feature of this control board is its ease of configuration of inputs and outputs according to any needs thus ensuring adaptability to any type of automation. It is therefore easy to set up and exclude all unnecessary functions.

3 TECHNICAL DATA

	TYPE 00				TYPE 01		TYPE 02	TYPE 03		
	Livi 5/24	Livi 8/24	REV	GULLIVER	GEKO	ANGOLO Ghost 100/200 LOOK - MAC LIVI 500/502 550PL	Livi 902/24 Livi 905/24	PASS	STOP	
									4÷5 mt	≥ 6 mt
Power supply (V)	230 V ~ ±10% (50/60 Hz)									
Rated power transformer (VA)	80 VA (230/22V)		250 VA (230/22V)		120 VA (230/22V)	150 VA (230/22V)			150 VA (230/22V)	250 VA* (230/22V)
Fuse F2 (A) (transformer)	1A		2A							3,15A*
Batteries	2x 12V 1,3A			2x 12V 4A	2x 12V 1,3A			2x 12V 4A		
Fuse F1 (A) (batteries input)	15A									
Outputs 24V motors (maximum output current) (A)	1x 5A		1x 10A		2x 5A				2x 5A	2x 7A*
	Warning: The above values are calculated by taking the maximum power supplied by the respective processors. In absolute terms, the maximum current from each output must not exceed 10A.									
Auxiliaries power supply output	24 V ⎓ (24V_AUX + 24V_ST = **max 200mA**)									
Stabilized power supply output for safety devices										
"Warning" output	+24 V ⎓ max 15 W									
Electric lock output	24V ⎓ max 5W or max 1 art. 110									
Flashing light output	24 V ⎓ max 15W									
Operating temperature range (°C)	-20÷50 °C									
Receiver frequency	433,92 MHz									
Transmitters type of coding	HCS fix-code - HCS rolling code - Dip-switch									
Max remote controllers managed	100									

* Values for STOP with boom ≥ 6 mt.

				
Livi 5/24 - Livi 8/24 Rev - Gulliver	**Geko**	**Look - Mac**	**Livi 500 - Livi 502**	**Ghost 100 - Ghost 200**
			***** If you are not using **DEA** operators, set the parameter "Selection type of operator" to the closer value as family type and performances.	
Livi 550PL	**Livi 902/24 Livi 905/24**	**Pass - Stop**		

4 CONFIGURATION OF THE CONTROL PANEL

The universal control unit NET24N can be used for the management of the following types (tYPE) of closures motorized by **DEA** System: swing and sliding gates, overhead doors and barriers.

In order to ensure maximum adaptability to each tYPE of closure, the control board provides an initial procedure, performed only at the first turn, for the optimal configuration of inputs, outputs and parameters (see diagram A). Once configured, the control panel will operate in the mode "dedicated" to the tYPE of selected closing. After performing the initial configuration it is sufficient to execute the standard programming for the installation on which it is operating.

All settings remain in memory even in the case of subsequent flare-ups (see diagram B).

If necessary the tYPE of configured closing can be later adjusted following diagram C.

FIRST CONTROL BOARD IGNITION

Configuration after the first ignition

A For the first control panel ignition, proceed as follows:

1. Apply power, the display shows in sequence the writing "rES-" and "tYPE" flashing;
2. Press the OK button and hold for 5 seconds until the display shows d000 on the display;
3. Acting on the + and − keys, select the desired configuration depending on the type of installation (es. d002) and confirm by pressing the OK button;
   At this point, the selection will be stored and reloaded each time in the future.
4. Follow signs, "tYPE", "-00-" followed by the symbol of closed gate "----".

Following ignitions

B If you have already saved a configuration, proceed as follows:

Apply power, the display shows in sequence the writing "rES-", "tYPE", "-00-" followed by the symbol of closed gate "----".

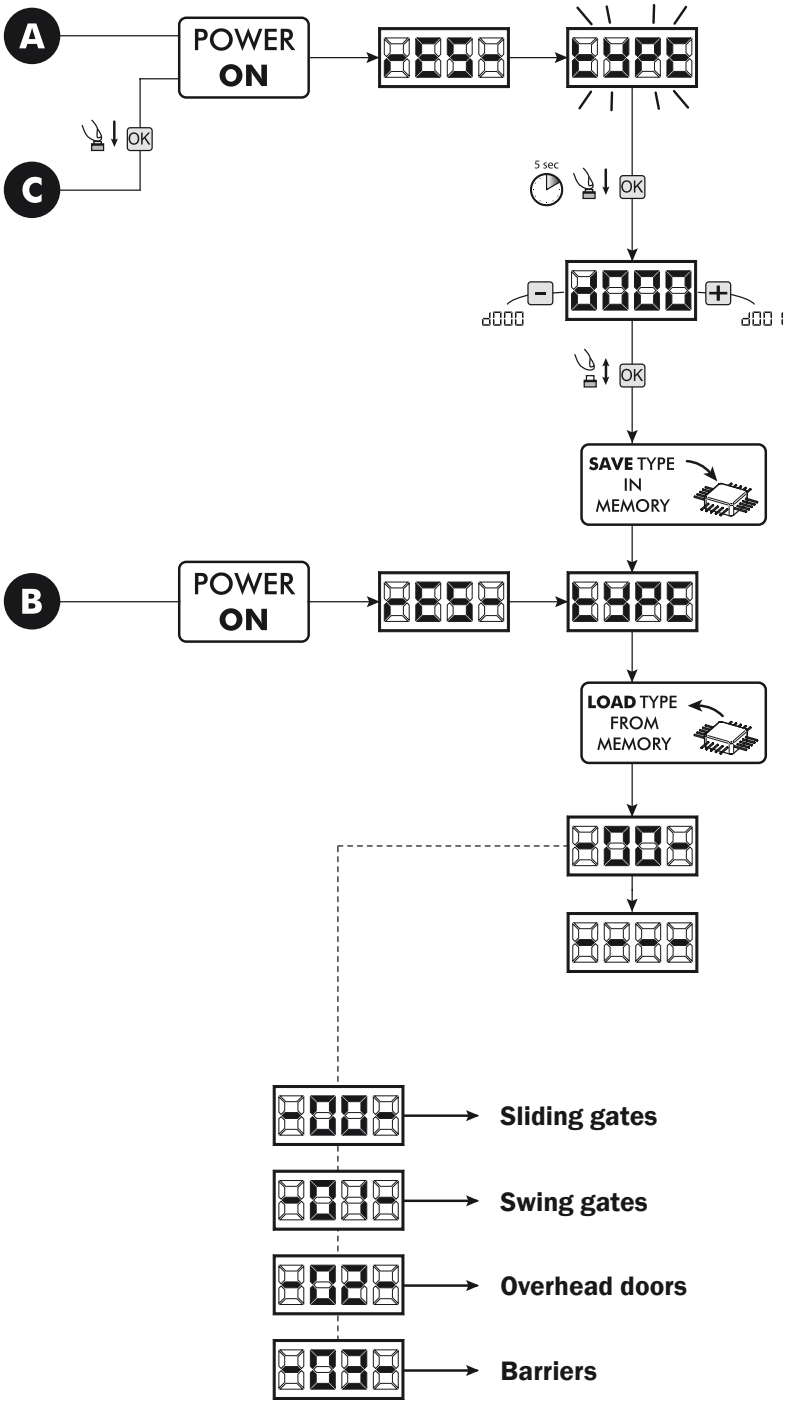
Modify the existing configuration

C If you have already saved a configuration and you want to change it, proceed as follows:

1. Hold down the OK button and give power, the display shows in sequence the writing "rES-" and "tYPE" flashing;
2. Press the OK button and hold for 5 seconds until the display shows d000 (the value changes to match the previous configuration used) on the display;
3. Acting on the + and −, select the new desired configuration depending on the type of installation (es. d002) and confirm by pressing the OK button;

   ⚠ Stop the reconfiguration procedure prior to confirmation, involves loading the previous configuration by the control panel without any modification.

   ⚠ However, if the reconfiguration procedure is brought to an end, the new configuration will take the place of the previous one and will be reloaded each time in the future.
4. Follow signs, "tYPE", "-00-" followed by the symbol of closed gate "----".



5 ELECTRICAL CONNECTIONS

Execute the wiring following the directions of table 1 and diagrams.

WARNING To ensure an appropriate level of electrical safety always keep the 230V power supply cables apart (minimum 4mm in the open or 1 mm through insulation) from low voltage cables (motors power supply, controls, electric locks, aerial and auxiliary circuits power supply), and fasten the latter with appropriate clamps near the terminal boards.

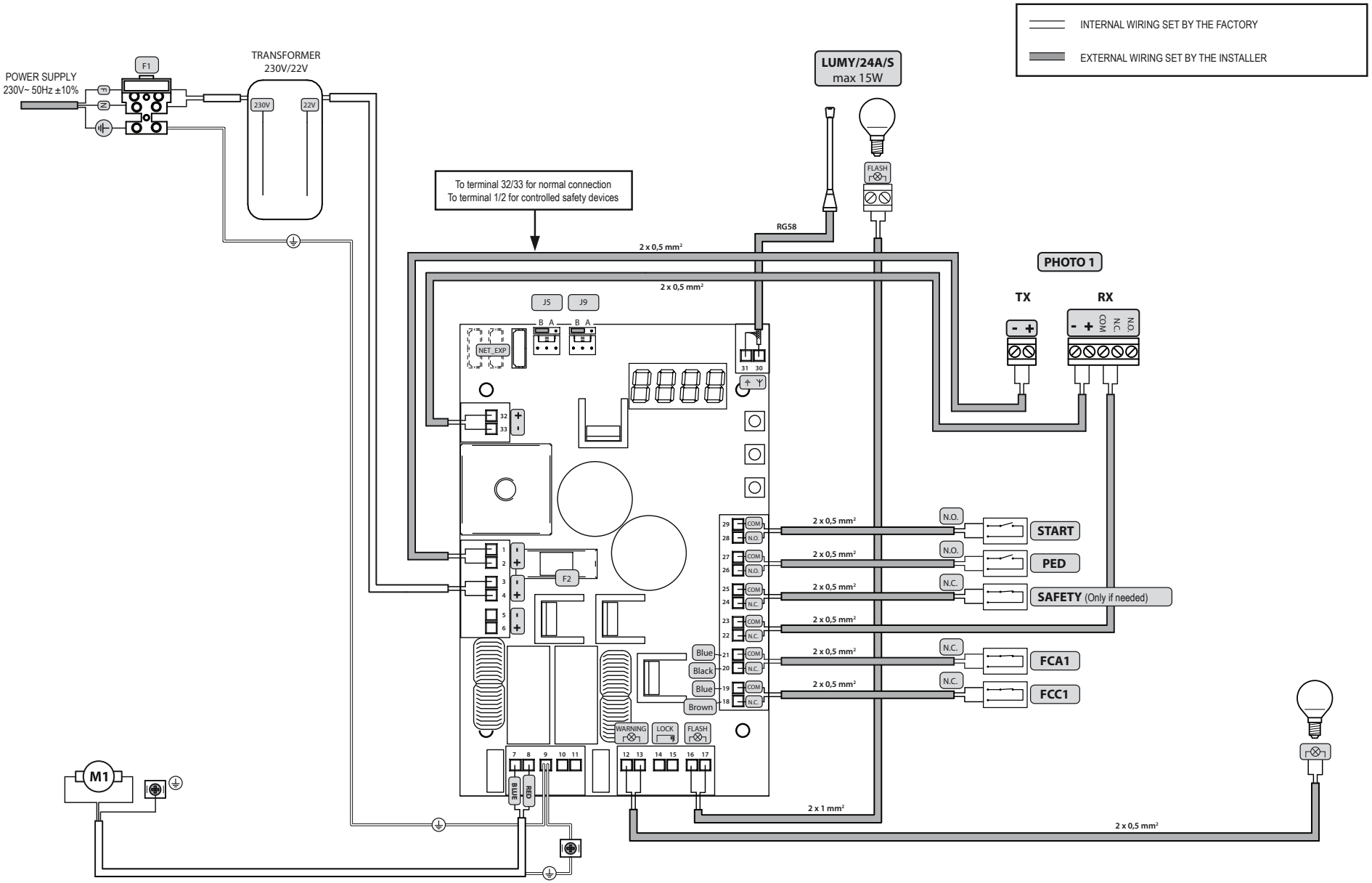
WARNING Connect to the power supply 230 V ~± 10% 50 Hz through a multi pole switch or a different device that can ensure multi pole disconnection from the power supply, with a contact opening of 3 mm.

WARNING To connect the encoder to the control panel, use only a dedicated cable 3x0,22mm^2.

Table 1 "terminal board connections"

3-4	22 V ~	22 V ~ transformer power supply input					
5-6	24VBatt	24 V ⎓ battery power supply or photovoltaic accumulator Green Energy input (follow carefully polarity indications).					
7-8	M1	Operator 1 output					
9	⏚	Connection of motors metallic parts					
10-11	M2	Operator 2 output (if present)					
12-13	WARNING	24 V ⎓ max 15 W output for open gate fix warning light (if P052=0), flashing (if P052=1) or courtesy light (if P052>1)					
14-15	ELETTR	**14 (-)** / **15 (+)**	"Boost" output for electric-lock, max 1 x art. 110 (if P062=0), 24V pulse output, max 5W (if P062=1), step by step (if P062=2), electro-brake output for not self-locking operators (if P062=3), output for electric-lock power supply via external relay (if P062=4), output for electro-magnets power supply for barriers (ifP062=5) or temporized output (if P062>5).					
16-17	FLASH	24 V ⎓ Flashing light output max 15W art. Lumy/24A/S					
		TYPE 00	**TYPE 01**	**TYPE 02**	**TYPE 03**	If the installation requires different commands and / or additional to the standard, you can configure each input to the required rate. **Refer to Chapter "Advanced Programming".**	
		If unused, short circuit					
18 / **19 - Com**	**Input 6**	014 (FCC 1) N.C.	011 (STOP) N.C.	000 (NONE) N.O.	000 (NONE) N.O.		
20 / **21 - Com**	**Input 5**	012 (FCA 1) N.C.	009 (PHOTO 2) N.C.	000 (NONE) N.O.	000 (NONE) N.O.		
22 / **23 - Com**	**Input 4**	008 (PHOTO 1) N.C.	008 (PHOTO 1) N.C.	011 (STOP) N.C.	000 (NONE) N.O.		
24 / **25 - Com**	**Input 3**	010 (SAFETY) N.C.	010 (SAFETY) N.C.	010 (SAFETY) N.C.	000 (NONE) N.O.		
26 / **27 - Com**	**Input 2**	002 (PEDESTRIAN) N.O.	002 (PEDESTRIAN) N.O.	008 (PHOTO 1) N.C.	008 (PHOTO 1) N.C.		
28 / **29 - Com**	**Input 1**	001 (START) N.O.	001 (START) N.O.	001 (START) N.O.	001 (START) N.O.		
30	Y	Aerial signal input					
31	⏚	Ground aerial input					
32-33	+24VAUX	**32 (+)** / **33 (-)**	24 V ⎓ power supply output for auxiliary devices			**(AUX + ST) = max 200mA**	
1-2	+24V_ST	**1 (-)** / **2 (+)**	Stabilized 24 V ⎓ power supply output for tested safety devices				
J5 B A / **J9** B A		Encoder selection Jumper: • A position = operators with encoder (remind to set P029=0) • B position = operators without encoder (remind to set P029=1)					

Wiring diagram for TYPE 00 (sliding gate)



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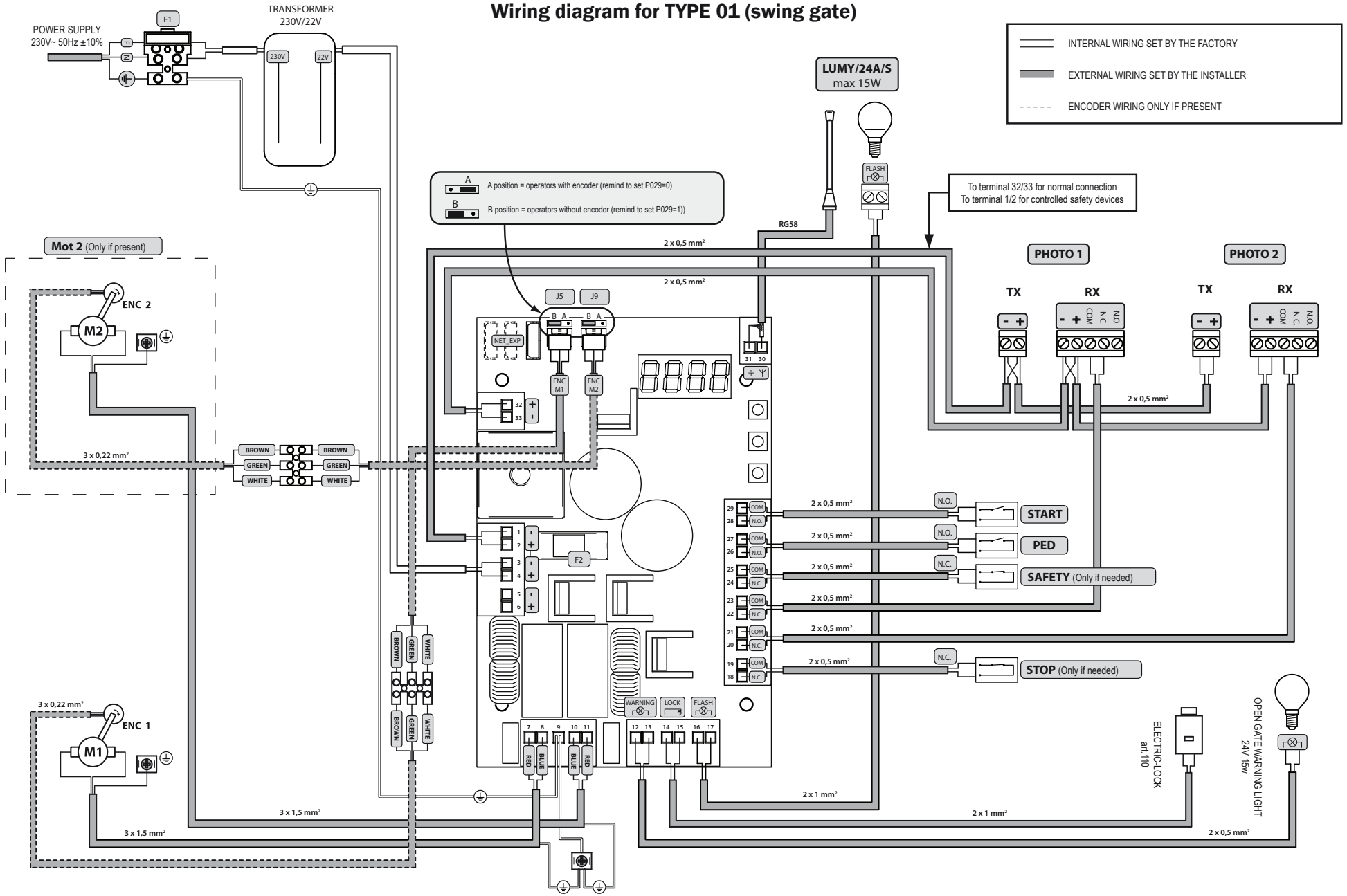
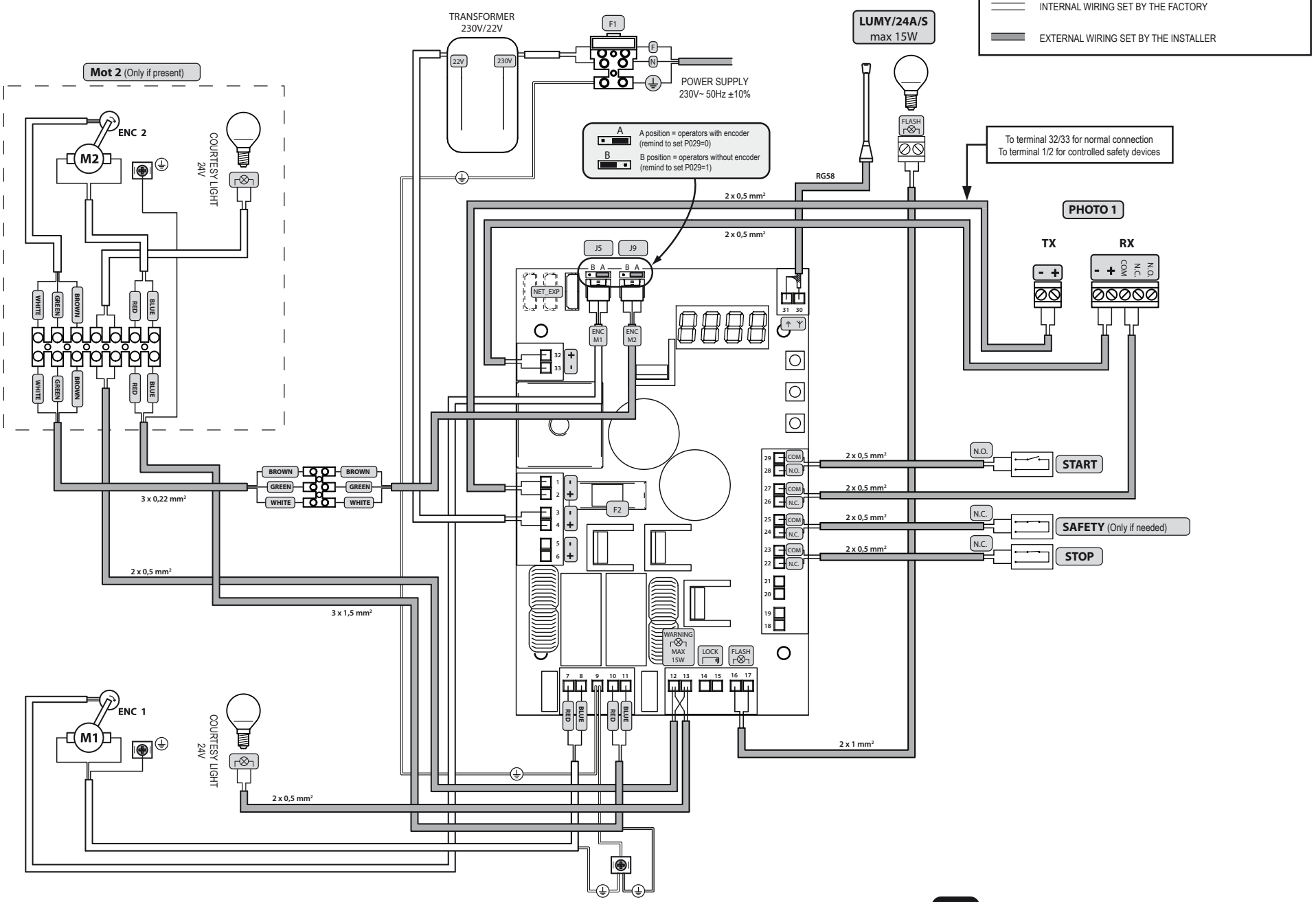
NET24N

Wiring diagram for TYPE 01 (swing gate)



Wiring diagram for TYPE 02 (garage door)



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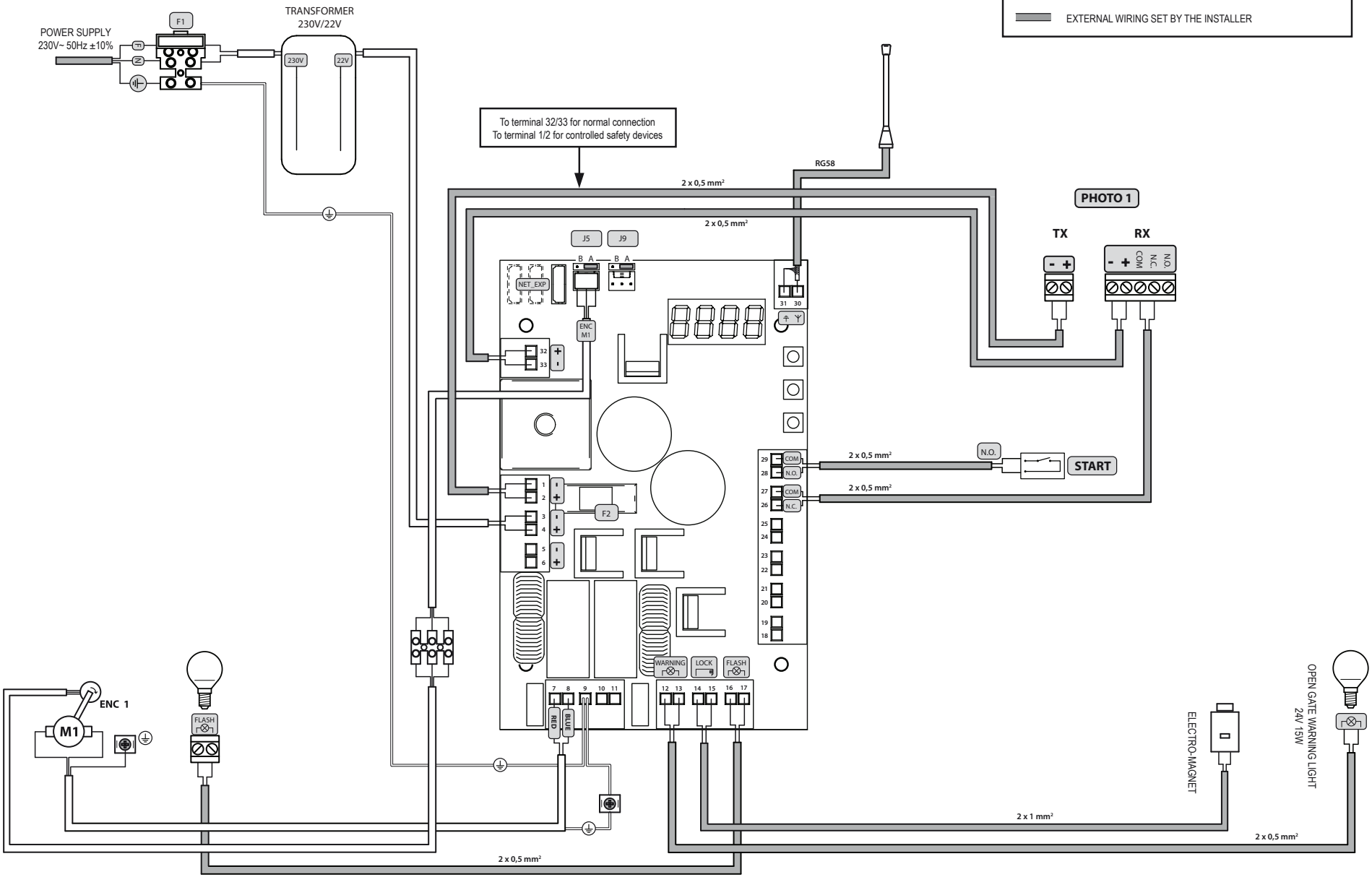
NET24N

Wiring diagram for TYPE 03 (barrier)



6 STANDARD PROGRAMMING

1 Power Supply

Give power supply, the display shows the following symbols "rES-", "tYPE", "-01-" (or the Type selected) and then "----".

* If the control panel has already been programmed and the power fails or is switched off - once power is returned and a START command is given, the position reset procedure is performed (see "rESP" in the table "WORKING STATUS MESSAGES" on page 43.

2 Visualisation of inputs and operations-counter status

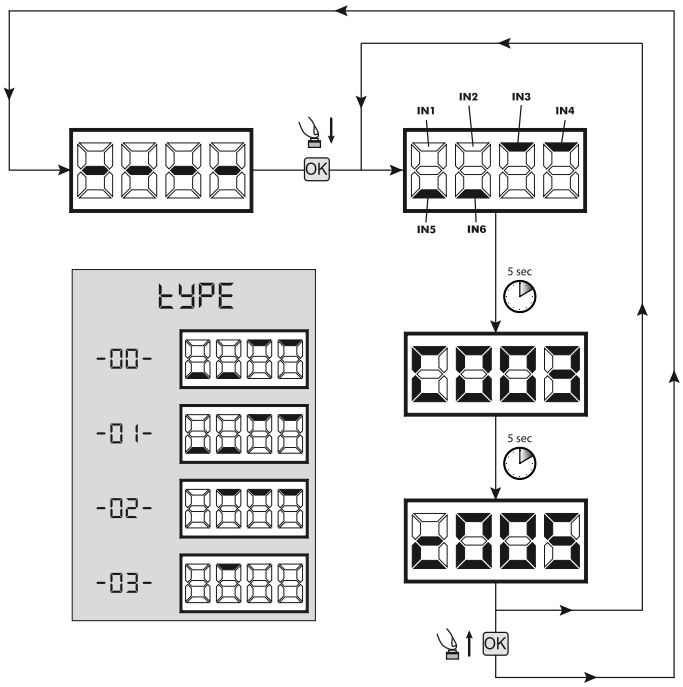
1. Press the OK key for 15 seconds;
2. The display will show respectively:
   Inputs status (check it's correct);

   OPEN CONTACT

   CLOSE CONTACT

   Total operations counter (* see P064):
   i.g.: C003 = 3x100* = 3000 operations performed

   Maintenance operations-counter (* see P065):
   i.g.: c005 = 5*x500 = 2500 operations remaining before the maintenance intervention request (c--- = manoeuvres-counter disabled)
3. Hold down the OK key to display a cyclic 3 options, or release the OK button to exit the parameter.



3 Selection type of operators

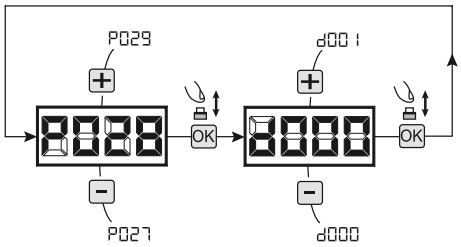
! IMPORTANT !

1. Scroll down the parameters with + and − keys until you visualise P028;
2. Access the parameter by pressing the OK key;
3. Acting on + and − keys, set:

Type 00	Type 01	Type 02	Type 03
• **005** 5/24 • **006** 8/24 • **007** Gulliver - Rev	• **000** Geko - Angolo • **001** Look - Mac • **002** Ghost • **003** Livi 500 - 502 - 550PL	• **003** Livi 902/24 - 905/24	• **003** Pass • **004** Stop

Warning: If you are using non **DEA** System operators, set the parameter on the closer value for family type and performances (refer to table on page 24).

4. Confirm your choice by pressing the OK key (display returns again to P028).

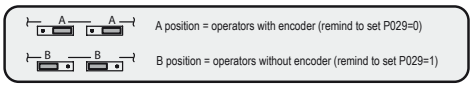


EN

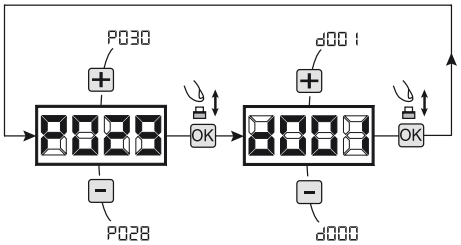
4 Selection operating with or without encoder

! IMPORTANT !

Warning: Remember to correctly set the jumpers J5 and J9.

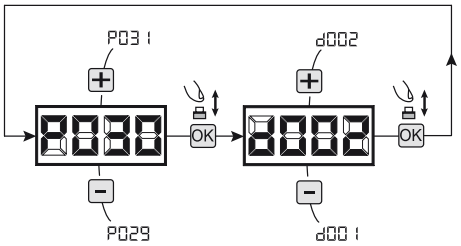


1. Scroll down the parameters with + and − keys until you visualise P029;
2. Access the parameter by pressing the OK key;
3. Acting on + and − keys, set:
   - d000=for operators with encoder;
   - d001=for operators without encoder;
4. Confirm your choice by pressing the OK key (display returns again to P029).



5 Selection 1 or 2 operators functioning

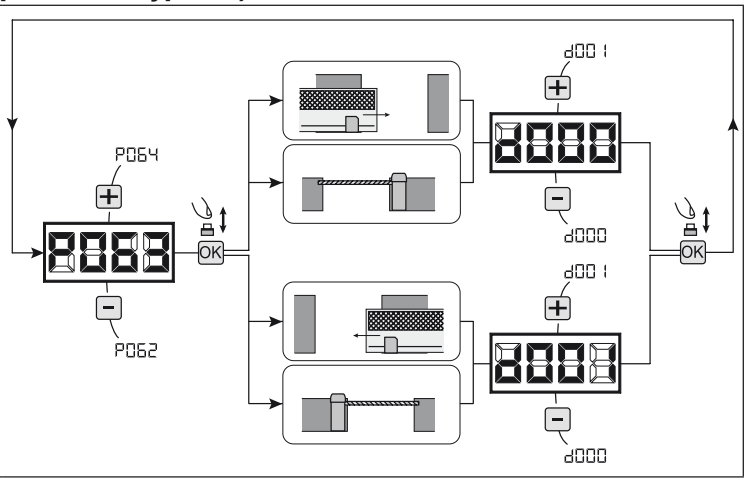
1. Scroll down the parameters with + and − keys until you visualise P030;
2. Access the parameter by pressing the OK key;
3. Acting on + and − keys, set:
   - d001=for a single motor operating;
   - d002=for 2 motors operating;
4. Confirm your choice by pressing the OK key (display returns again to P030).



6 Selection of direction of motion (only Type 00 and Type 03)

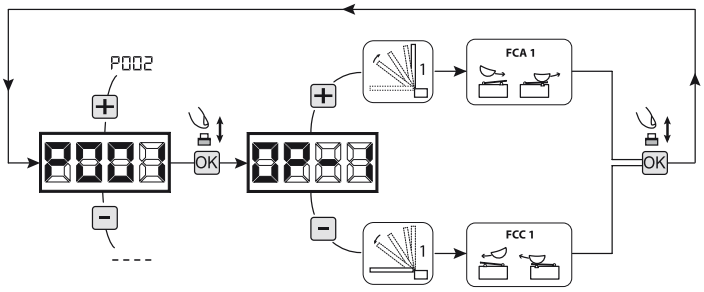
1. Scroll down the parameters with + and − keys until you visualise P063;
2. Access the parameter by pressing the OK key;
3. Acting on + and − keys, set:
   - d000=motor in standard position;
   - d001=motor in inverted position;
4. Confirm your choice by pressing the OK key (display returns again to P063).

Warning: The parameter automatically reverses the motors output open/close and any limit switch input open/close.



7 How to adjust the limit switche

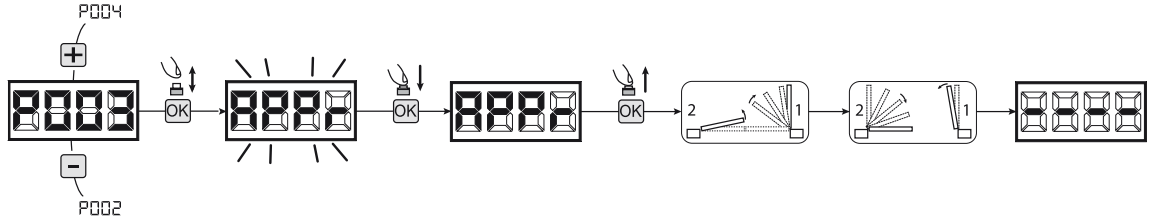
1. Scroll down the parameters untill you visualize P001;
2. confirm by pressing the OK key;
3. by pressing + (**OPEN**) and − (**CLOSE**), move the leaf in the opening position and adjust the limit switch cam so that it pushes the microswitch in that point;
   Repeat adjusting the closing limit switch.
4. Confirm by pressing the OK key (display shows again P001).



WARNING If the Operator 2 is present, repeat the previous settings using P002.

8 Motor stroke learning

1. Scroll down the parameters with + and − keys until you visualise P003;
2. Access the parameter by pressing the OK key;
3. When "APPr" flashes, continue pressing the OK key;
4. Release the OK key when "APPr" stops flashing; Start the learning procedure with operator 1 opening (if it starts closing, disconnect the power supply, inverse the operator cables and repeat the operation);
5. Wait for the door (or doors in case of using 2 motors) searches and stops on the opening stop and then on the closing stop.
   If you want to anticipate the stopping strokes in opening, you can manually intervene by giving an impulse to "Start" button (or pressing the "OK" on the control panel) simulating the stroke.
6. Once the procedure is ended, the display will show "- - - - ".



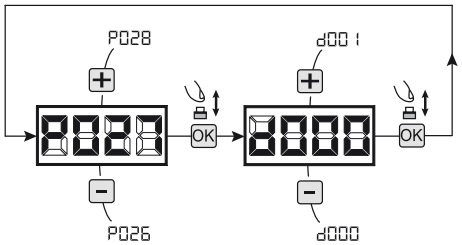
WARNING (only Type 01 and Type 03) Once you have executed the learning stroke, operate a complete cycle (opening/closing) and then check the manual release to make sure it is working properly. If it's to "hard" increase the value of P057 of 1 or more.

9 Transmitters learning

9.1 Transmitters coding selection

1. Scroll down the parameters with + and − keys until you visualise P027;
2. Confirm by pressing on the OK key;
3. Select the type of transmitter by scrolling + and − keys:
   - d000=fix rolling-code (**suggested**);
   - d001=complete rolling-code;
   - d002=dip-switch;
4. Confirm by pressing on the OK key (display shows again P027).

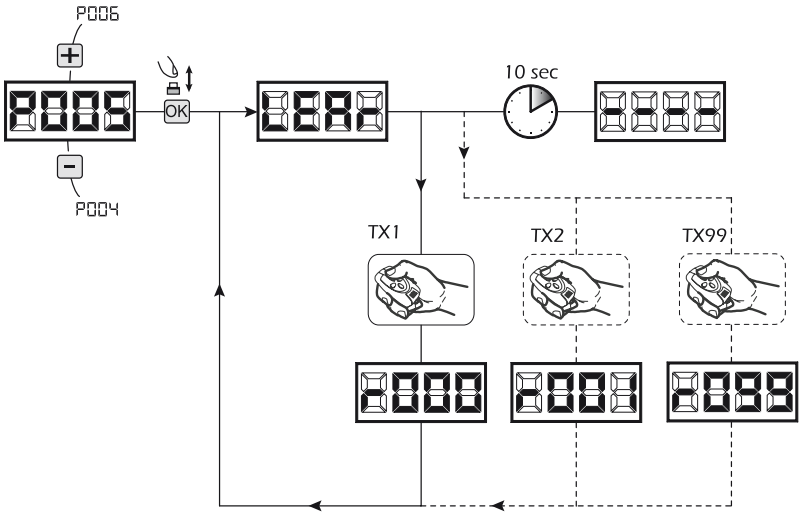
Warning: If you need to vary the type of encoding, and only if other remotes with different encoding are memorized, you need to erase memory (P004) **AFTER** you have set the new encoding.



9.2 Learning

1. Scroll down the parameters with + and − keys until you visualise P005;
2. Confirm by pressing on the OK key;
3. When the symbol "LEAr" appears, press on any key of the transmitter you want to memorize;
4. The display visualizes the number of the transmitter just memorized and then "LEAr";
5. Memorize all necessary transmitters repeating this procedure from step 3;
6. Wait 10 seconds before quitting the memorization mode, display shows now "- - - - ".

Warning: In the case of rolling code remotes, the receiver can be put into learning mode by pressing the hidden button on a remote control previously learned.

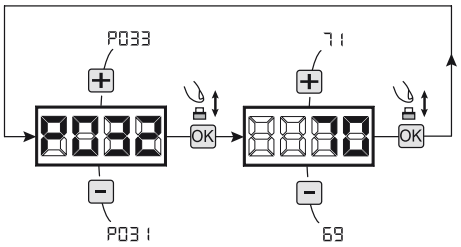


EN

10 Adjustment of operating parameters

If you need to modify the operating parameters (force, speedness etc..):

1. Scroll down the parameters until you visualize the desire parameter (i.e. P032);
2. Confirm by pressing on the OK key;
3. By pressing on + and −, set up the desired value;
4. Confirm by pressing on the OK key (display shows the parameters previously selected).



For the complete list of the "Operating Parameters" See the table on page. 39.

11 Programming complete

WARNING At the end of the programming procedure, use the buttons + and − until the appearance of the symbol "- - - - ", the operator is now ready again for new manoeuvres.

To perform any "Advanced Programming" operations (cancellation of the remotes, configuration inputs, etc. ..), see on page 35.

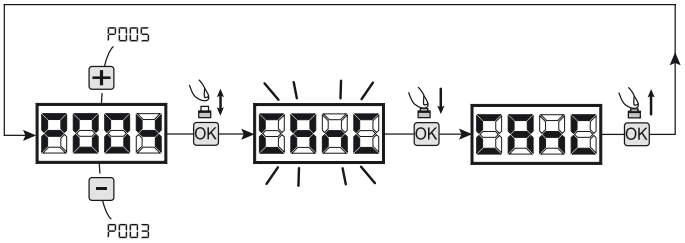
7 ADVANCED PROGRAMMING

Here are some added programming procedures relating to remotes memory management and advanced configuration of the control inputs.

1 Deletion of memorized transmitters

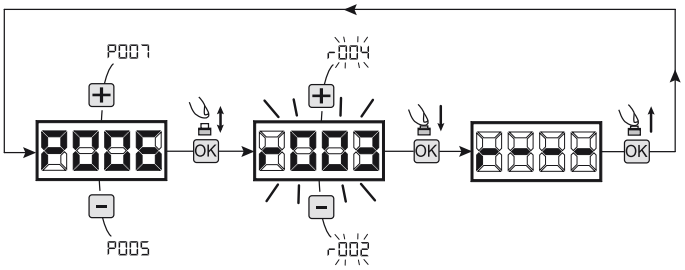
1.1 Deletion of all transmitters

1. Scroll down the parameters until you visualize P004;
2. Confirm by pressing on the OK key;
3. When "CAnC" is flashing, press the OK key for a few seconds;
4. Release the OK key as soon as "CAnC" stops flashing;
5. All memorized transmitters have been deleted (display shows again P004).



1.2 How to search and delete a transmitter

1. Scroll down the parameters until you visualize P006;
2. Confirm by pressing on the OK key;
3. By pressing on + and −, keys, select the transmitter you want to delete (eg. r003);
4. When "r003" flashes, confirm the deletion by pressing the OK key for a few seconds;
5. Release the OK key when appears "r - - -";
6. The selected transmitter is deleted (display shows again P006).

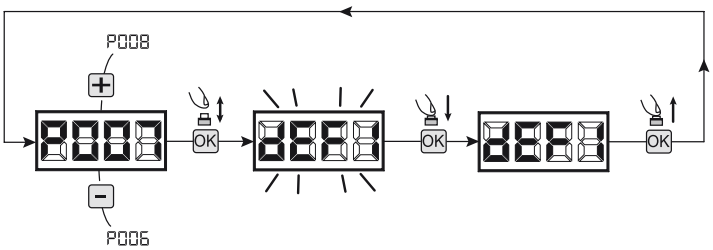


2 Restoring default parameters

2.1 Restoring operating parameters

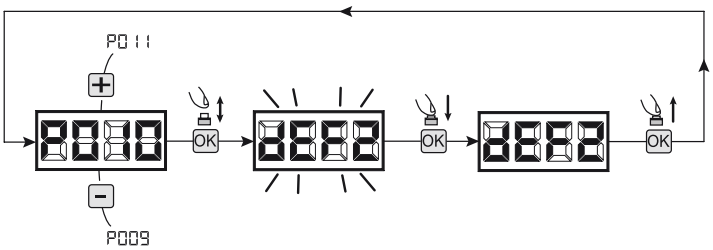
1. Scroll through the parameters with the buttons + and − until the display shows P007;
2. Confirm by pressing on the OK key;
3. When "dEF 1" is flashing, press the OK key for a few seconds;
4. Release the OK key as soon as "dEF 1" stops flashing; All the default values are restored except for the parameters from P016 to P022 and P076 to P098 for the configuration currently in use;
5. At the end of the operation display returns to P007.

Warning: After you restore the default parameters, you must program the control panel again and adjust all operating parameters, in particular, remember to properly set the operator configuration parameters. (P028 - P029 - P030).
Warning: For reversible motors with electro-brake, remember to set P062 = 3 at the end of the procedure.



2.2 Restoring "I/O" setting (Input/Output)

1. Scroll through the parameters with the buttons + and − until the display shows P010;
2. Confirm by pressing on the OK key;
3. When "dEF2" is flashing, press the OK key for a few seconds;
4. Release the OK key as soon as "dEF2" stops flashing; All the default values only for the parameters from P016 to P022 and from P076 to P098 are restored for the configuration currently in use;
5. At the end of the operation display returns to P010.



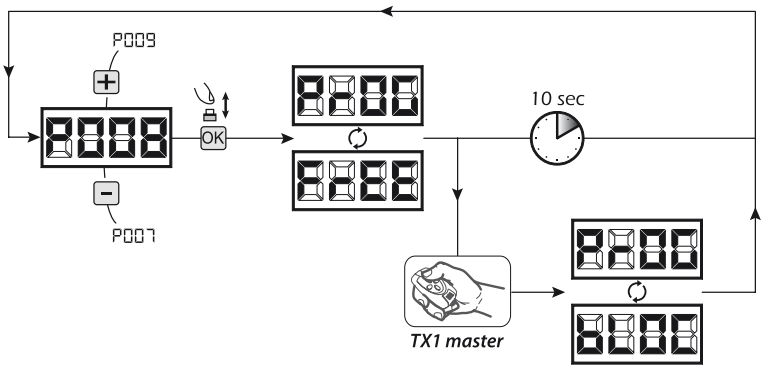
EN

3 Locking-Unlocking access to programming

By using a “dip-switch” remote (regardless of the type of remotes already memorized) it’s possible to lock-unlock access to the programming of the control panel to avoid tampering. The remote setting is the locking-unlocking code verified by the control board.

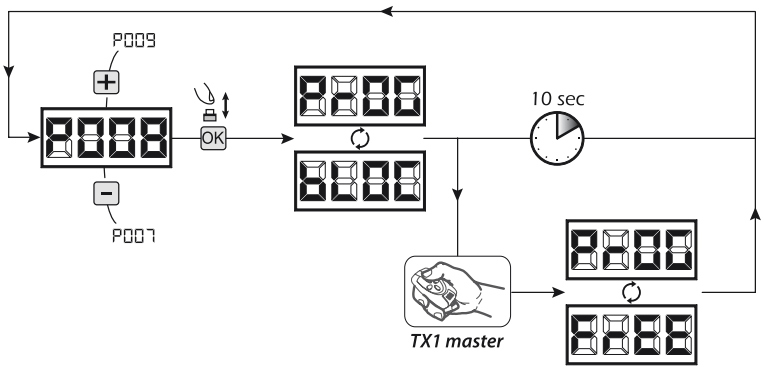
3.1 Locking access to programming

1. Scroll through the parameters with the buttons [+] and [−] until the display shows P008;
2. Access the parameter by pressing the button [OK];
3. The display shows alternately the writing PrOG/FrEE to indicate that the control board is waiting for the transmission of the block code;
4. Within 10 seconds press CH1 on the “TX Master”, the display shows PrOG/bLOC before returning to the list of parameters;
5. Access to programming is locked.



3.2 Unlocking access to programming

1. Scroll through the parameters with the buttons [+] and [−] until the display shows P008;
2. Access the parameter by pressing the button [OK];
3. The display shows alternately the writing PrOG/bLOC to indicate that the control board is waiting for the transmission of the unlocking code;
4. Within 10 sec. press the CH1 of the “TX Master”, the display shows PrOG/FrEE before returning to the list of parameters;
5. Access to programming is unlocked.

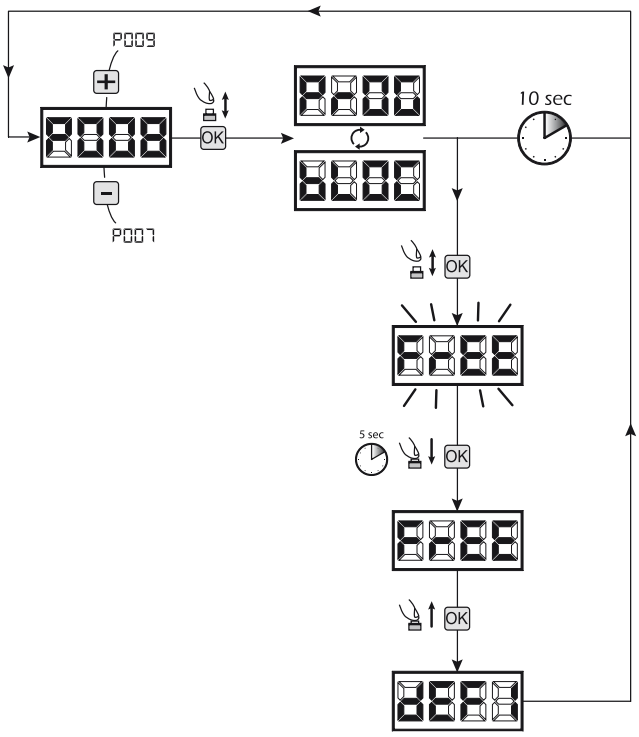


3.3 Unlocking access to programming and global reset

WARNING! This procedure involves the loss of all stored settings.

The procedure allows the unlocking of the control panel without having to know its unlocking code.
Following this release, you must program the control panel again and adjust all operating parameters, in particular, remember to properly set the configuration of parameters (P028 - P029 - P030 – operator configuration). You will also need to repeat the measurement of impact forces to ensure the installation compliance to standards.

1. Scroll through the parameters with the buttons [+] and [−] until the display shows P008;
2. Access the parameter by pressing the button [OK];
3. The display shows alternately the writing PrOG/bLOC;
4. Press the button [OK], the display shows the flashing writing FrEE ;
5. Press the button again and hold for 5 seconds (releasing it before, the procedure is terminated): The display shows the fixed writing FrEE followed by dEF 1, before returning to the list of parameters;
6. Access to programming is unlocked.



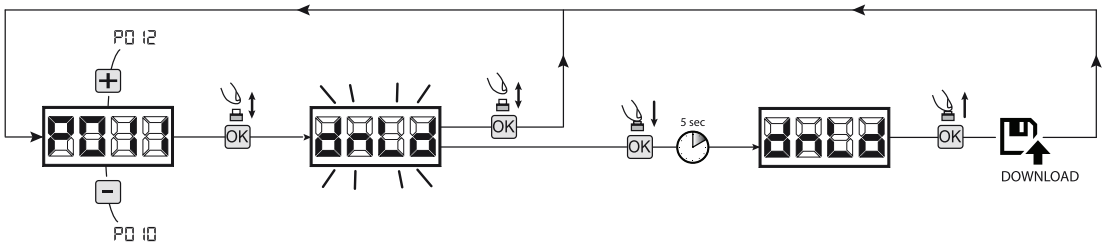
4 Downloading/uploading data memory

4.1 Downloading data to an external memory unit (DOWNLOAD)

1. Scroll down the parameters with [+] and [−] keys until you visualize P011;
2. Press the [OK] key, the display visualizes the word "dnLd" flashing;
3. Press the [OK] again and continue pressing it for 5 sec (if you release it before this period, the procedure is stopped);
4. Release the [OK] key as soon as the word "dnLd" stops flashing;
   All the control panel configurations (TYPE, parameters, remotes, operators stroke, etc..) are saved in the external memory unit;

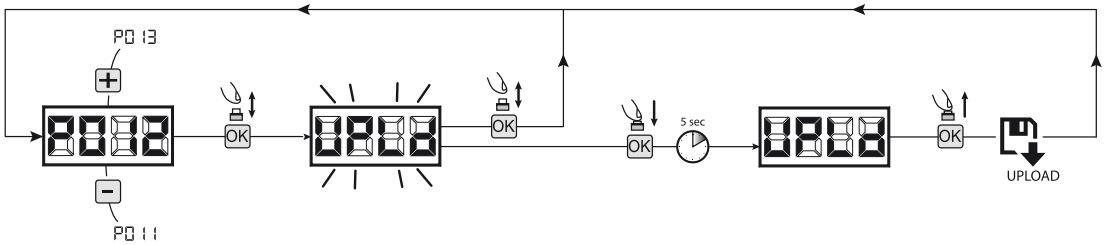
Warning: If there is any data in the external memory, during the memory download they will be overwritten.

5. At the end of the operation display returns to P011.



4.2 Uploading data from an external memory unit (UPLOAD)

1. Scroll down the parameters with [+] and [−] keys until you visualize P012;
2. Press the [OK] key, the display visualizes the word "UPLd" flashing;
3. Press the [OK] again and continue pressing for 5 sec (if you release it before this period, the procedure is stopped);
4. Release the [OK] key as soon as the word "UPLd" stops flashing;
   All the control panel configurations (TYPE, parameters, remotes, operators stroke, etc..) contained in the external memory unit are uploaded in the connected control panel;
5. At the end of the operation display returns to P012.

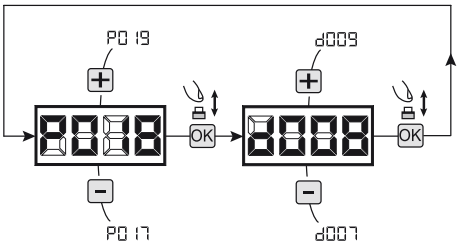


WARNING If you are not connected to any external storage units or if the connecting cable is disconnected during the data transfer operation, the display will visualize Err9, then the control unit is entirely reset and the display shows the word "TYPE" flashing. Refer to the instruction of the external memory card to restore the operation of the control panel.

5 Inputs configuration

Where the installation requires different commands and / or additional to the standard ones described by plan, you can configure each input for the operation desired (eg START, PHOTOS, STOP, etc ...).

1. Scroll down the parameters with the [+] and [−] to see that corresponding to the desired one:
   - P017=for INPUT 1;
   - P018=for INPUT 2;
   - P019=for INPUT 3;
   - P020=for INPUT 4;
   - P021=for INPUT 5;
   - P022=for INPUT 6;
2. Confirm by pressing on the [OK] key to get access to the parameter (eg. P018);
3. Scroll down with the [+] and [−], keys to set the value corresponding to the desired operation (refer to table "Input Configuration parameters" **on page 38**);
4. Confirm by pressing on the [OK] key (display shows again P018).
5. Execute the new connection to the input just reconfigured.



6 Programming complete

WARNING At the end of the programming procedure, use the buttons [+] and [−] until the appearance of the symbol "----", the operator is now ready again for new manoeuvres.

EN

	PAR.	PROCEDURE	SETTABLE VALUES
PROGRAMMING PROCEDURES	001	Positioning of operator 1	
	002	Positioning of operator 2	
	003	Memorization of the motors' stroke	
	004	Deletion of transmitters	
	005	Transmitters memorizing	
	006	Search and deletion of a transmitter	
	007	Restoring the operating parameters	
	008	Lock access to programming	
	009	How to learn connected DE@NET devices (unused at the moment)	
	010	Restoring the "I/O" configurations (input/output)	
	011	Downloading data on the external memory unit	
	012	Uploading data from an external memory unit	
	013	Unused parameter	
	014	Unused parameter	
	015	Unused parameter	

	PAR.	SETTABLE VALUES	SETTABLE VALUES		DEFAULT VALUES (for different standards of installation)			
					TYPE 00	TYPE 01	TYPE 02	TYPE 03
INPUTS CONFIGURATION PARAMETERS	016	INPUT_3 selectioning input type	• 000: IN3 type=free contact • 001: IN3 type=constant resistance 8K2		000	000	000	000
	017	INPUT_1 operating selection	• 000: NONE (unused parameter) • 001: START (start) • 002: PED. (pedestrian) • 003: OPEN (separated open) • 004: CLOSE (separated close) • 005: OPEN_PM (man present open) • 006: CLOSE_PM (man present close) • 007: ELOCK-IN (electric-lock activation. See P062) • 008: PHOTO 1 (photocell 1) • 009: PHOTO 2 (photocell 2) • 010: SAFETY 1 (safety rib 1) • 011: STOP (lock) • 012: FCA1 (opening limit switches Mot1) • 013: FCA2 (opening limit switchtes Mot2) • 014: FCC1 (closing limit switches Mot1) • 015: FCC2 (closing limit switches Mot2) • 016: SAFETY 2 (safety rib 2) • 017: OPEN_INT (with NET_EXP only) • 018: OPEN_EXT (with NET_EXP only) • 019: AUX_IN (with NET_EXP only)	**IN1**	001	001	001	001
	018	INPUT_2 operating selection		**IN2**	002	002	008	008
	019	INPUT_3 operating selection		**IN3**	010	010	010	000
	020	INPUT_4 operating selection		**IN4**	008	008	011	000
	021	INPUT_5 operating selection		**IN5**	012	009	000	000
	022	INPUT_6 operating selection		**IN6**	014	011	000	000

					TYPE 00	TYPE 01	TYPE 02	TYPE 03
INPUTS CONFIGURATION PARAMETERS	023	Allocation of CHANNEL 1 of remotes	• 000: NONE (unused parameter) • 001: START (start) • 002: PEDESTRIAN (pedestrian) • 003: OPEN (separated open) • 004: CLOSED (separated close) • 005: OPEN_PM (man present open) • 006: CLOSED_PM (man present close) • 007: ELOCK-IN (electric-lock activation. See P062) • 008: AUX_IN (with NET_EXP only)	**CH1**	001	001	001	001
	024	Allocation of CHANNEL 2 of remotes		**CH2**	000	000	000	000
	025	Allocation of CHANNEL 3 of remotes		**CH3**	000	000	000	000
	026	Allocation of CHANNEL 4 of remotes		**CH4**	000	000	000	000
	027	Selection of type of remotes	• 000: HCS fix-code • 001: HCS rolling-code • 002: Dip-switch		000	000	000	000
OPERATORS CONFIGURATION PARAMETERS	028	Selection type of operators	• 000: GEKO - ANGOLO • 001: LOOK - MAC • 002: GHOST 100/200 • 003: 500 - 502 - 902 - PASS - 550PL • 004: STOP • 005: LIVI 5/24 • 006: LIVI 8/24 • 007: GULLIVER - REV		005	000	003	003
	029	Selected work with or without encoders. CAUTION: Remember to correctly set the jumpers J5 and J9 (see table 1) WARNING: J5, J9 and P029 must be set correctly before performing the procedure for programming	• 000: motors with encoder • 001: engines without encoder		001	001	000	000
	030	Selectioning operators number	• 001: one operator • 002: two operators		001	002	001	001
OPERATING PARAMETERS	031	Operators speed adjustment during slow-down while opening	15%tot.....100%tot		040	050	050	030
	032	Operators speed adjustment during the stroke while opening	15%tot.....100%tot		100	100	100	100
	033	Operators speed adjustment during the stroke while closing	15%tot.....100%tot		100	100	100	100
	034	Operators speed adjustment during slow-down while closing	15%tot.....100%tot		040	050	050	030
	035	Slow down duration adjustment while opening	5%tot.....80%to		025	020	020	030
	036	Slow down duration adjustment while closing	5%tot.....80%tot		025	020	020	030
	037	Operator 1 force adjustment while opening (if = 100% obstacle detection deactivated)	15%tot.....100%tot		050	050	050	099
	038	Operator n.1 force adjustment while closing (if = 100% obstacle detection deactivated)	15%tot.....100%tot		050	050	050	099
	039	Operator n.2 force adjustment while opening (if = 100% obstacle detection deactivated)	15%tot.....100%tot		/	050	/	099
	040	Operator n.2 force adjustment while closing (if = 100% obstacle detection deactivated)	15%tot.....100%tot		/	050	/	099
	041	Automatic closing times adjustment (if = 0 automatic closing deactivated)	0sec.....255sec		000	000	000	000
	042	Pedestrian automatic closing time adjustment (se = 0 pedestrian automatic closing deactivated)	0sec.....255sec		000	000	000	000
	043	Pedestrian stroke duration adjustment	5%tot.....100%tot		030	035	035	100
	044	Pre-flashing time adjustment	0sec.....10sec		000	000	000	000
	045	Adjustment of phase displacement time while opening	0sec.....30sec		/	001	/	/
	046	Adjustment of phase displacement time while closing	0sec.....30sec		/	003	/	/
	047	Collectivity function: if it is activated it deactivates both opening and closing inputs for the whole duration of automatic opening and closing	• 000: “collectivity function” deactivated • 001: “collectivity function” activated		000	000	000	000

					TYPE 00	TYPE 01	TYPE 02	TYPE 03
OPERATING PARAMETERS	048		Ram blow function: if=0 “Ram blow” function deactivated; if=1 it pushes the motors closed for one second before each opening movement, so as to ease the releasing of any electric lock; if>1 it execute a periodic pushing stroke so as to maintain the wings under pressure on the closing strokes. If closing limit switches are installed, it performs this function only if they are not activated, i.g. when there’s a pressure decrease on the stroke.	• 000: “ram blow” deactivated • 001: “ram blow function” activated • >001: “ram blow” periodic (X*1 min) (2.....255)	000	000	000	000
	049		“Reversal” mode selection (during the manoeuvre a command impulse reverse the mouvement) or “step by step” (during the manoeuvre a command impulse stops the mouvement). A next impulse restart the operator to the opposite direction.	• 000: “reversal function” • 001: “step by step function”	001	000	000	000
	050	PHOTO 1	PHOTO input functioning: If=0: photocell enabled while closing and starting when the gate is stopped; if=1 photocells are always enabled; if=2 photocells are enabled while closing only. When enabled, its activation provokes: the inversion (while closing), the stop (while opening) and prevent the starting (when gate is closed). If=3-4-5, the operation is the same as the values 0-1-2 but with “close immediately” enabled: in any case, during the opening and/or the pause time, removal of a possible obstacle causes the gate automatically closes after a fixed delay of 5 sec.	• 000: photocell enabled while closing and when gate is stopped • 001: photocells always enabled • 002: photocells enabled only while closing • 003: as 000 but with “close immediately” enabled • 004: as 001 but with “close immediately” enabled • 005: As 002 but with “close immediately” enabled	002	002	002	002
	051	PHOTO 2			000	001	002	002
	052		Operation mode selection of the warning light output: If = 0 “warning light” (output always ON when the gate is open, OFF after a closing operation), If = 1 “flashing warning light” (slow intermittent output during opening and fast while closing, always ON at gate opened, always OFF at the end of a closing operation only), If> 1 “courtesy light” (output ON during each movement, OFF when the motor stops, after the setting delay)	• 000: “fix warning light” • 001: “flashing warning light” • >001 : “courtesy light” off delay (2sec.....255sec)	001	001	060	001
	053		Searches for end of stroke while opening too: when activated, operators stop only at their arrival et the end of stroke, also while opening. **Warning:** During the emergency operation (rESP), the motor executes the first maneuver while opening. In addition, if any limit switches, the parameter is forced to 1.	• 000: Stop when opening on a memorized point • 001: Stop when opening on the end of stroke	/	000	000	001
	054		“soft start” function: motors accelerate gradually until they reach the set speed, avoiding sudden departures	• 000: “soft start” deactivated • 001: “soft start” activated • 002: “long soft start” activated	001	001	001	001
	055		Adjust the inversion on obstacle period (detected by internal anti-crushing sensor or by the safety input when activated): If = 0 it makes a complete inversion, if> 0 indicates the duration (in seconds) of the run, after inversion resulting from detection of an obstacle during the opening.	• 000: complete reversal on obstacle • >000: duration of reversal on obstacle (1sec.....10sec)	000	000	000	000
	056		Adjust the inversion on obstacle period (detected by internal anti-crushing sensor or by the safety input when activated): If = 0 it makes a complete inversion, if> 0 indicates the duration (in seconds) of the run, after inversion resulting from detection of an obstacle during the closing.	• 000: complete reversal on obstacle • >000: duration of reversal on obstacle (1sec.....10sec)	000	000	000	000
	057		Facilitation manual release: If≠0, after detecting the locking stop, the engine reverses for a brief time to release the pressure on it, and thus facilitate the manual release. The set value shows the length of the inversion. If=0 function disabled	• 000: facilitating release disabled • >000: facilitation activated with release time equal to: (1x25ms.....20x25ms) (1x25ms.....40x25ms) **(only Type 0)**	000	003	003	000
	058		Adjustment of the opening stroke margin: it adjusts the duration of the last part of the stroke during which an obstacle is interpreted as a stroke, blocking the motor without performing the inversion. For motors with encoders, the set value indicates the number of revolutions of the rotor; while for motors without encoder, the value is expressed in% of the maximum stroke. **Warning:** for motors without encoder, if P035 (duration slow-down while opening) is >10%, it forces the stroke detection margin so that it’s the same than the slow-down.	1.....255 (motors with encoder) 0%.....100% (motors without encoder)	/	025	025	020
	059		Adjustment of the closing stroke margin: it adjusts the duration of the last part of the stroke during which an obstacle is interpreted as a stroke, blocking the motor without performing the inversion. For motors with encoders, the set value indicates the number of revolutions of the rotor; while for motors without encoder, the value is expressed in% of the maximum stroke. **Warning:** for motors without encoder, if P036 (duration slow-down while closing) is >10%, it forces the stroke detection margin so that it’s the same than the slow-down.	1.....255 (motors with encoder) 0%.....100% (motors without encoder)	/	025	025	020

					TYPE 00	TYPE 01	TYPE 02	TYPE 03
OPERATING PARAMETERS	060		Operators force adjustment at stroke arrival - If = 0, setting off (the force value on the stroke is calculated automatically) - If ≠ 0, indicates the value (expressed in% of the max value) of the force exerted on the stroke.	0%tot.....100%tot	/	035	000	000
	061		"Energy saving" mode: If=1 after 10sec of inactivity, the control panel turns the 24V outputs and the display off that will be turned on at first command received (use recommended battery-powered and / or solar panel). **Warning:** when "Energy saving" is enabled, SAS function is not available. **Warning:** when "Energy saving" is enabled, only the stabilized output 24V_ST must be used to power accessories.	• 000: "Energy saving" not active • 001: "Energy saving" active	000	000	000	000
	062		Electric-lock output operating: If=0 "boost" output for electric-lock art.110 power supply, If=1 24V output controlled by the ELOCK_IN input as pulsed mode,If=2 24V output controlled by the ELOCK_IN input as step-by-step mode, If=3 electro-brake output for not self-locking operators, If=4 24V output for electric-lock power supply via an external relay, If=5 24V output for electro-magnets power supply for barriers, If>5 24V output controlled by the ELOCK_IN input as temporized mode (the set value indicates the switch-off delay in seconds).	• 000: "Boost" output for electric-lock art.110 power supply • 001: "24V ⎓ pulse output max 5W • 002: "24V ⎓ step-by-step output max 5W • 003: "Electro-brake output for not self-locking operators • 004: "Output for electric-lock power supply via an external relay • 005: "output for electro-magnets power supply for barriers • >005: "24V ⎓ temporized output max 5W (6sec.....255sec)	000	000	000	005
	063		Run direction inversion: If=1 automatically reverses the outputs open/close of the operators and any opening/closing limit switches inputs, avoiding having to manual change the wiring when installing the operator in an inverted position.	• 000: "Standard installation" • 001: "Inverted installation"	000	000	000	000
	064		Multiplier operations-counter: Multiply the number of operations after which the total operations-counter will be updated. To view the values, refer to the section "Visualisation of inputs and operations-counter status".	• 000: "x100 • 001: "x1000 • 002: "x10000 • 003: "x100000	001	001	001	001
	065		Maintenance Operations-counter: if = 0 reset the counter and disables the intervention request , if> 0 indicates the number of operations (x 500) to be made before the control panel executes a 4 second additional pre-flash to indicate the need of maintenance. i.g.: If P065 = 050, operations number = 50x500 = 25000 operations **Warning:** Before you set a new value of the counter-manoeuvres maintenance, the same must be reset by setting P065= 0 and only later P065 = "new value".	• 000: "Request Maintenance disabled • >000: "Number of operations (x 500) for required maintenance (1.....255)	000	000	000	000
	066		Selection of operating flashing light output: If=0 intermittent flashing light output; If=1 Fixed flashing light output (for flashing lights with intermittent interior circuits).	• 000: "intermittent flashing light output • 001: "fixed flashing light output	000	000	000	000
	067	SAFETY 1	Operation of the SFT input: if = 0 safety edge always enabled, if = 1 safety edge enabled only while closing, if = 2 safety edge enabled only while closing and before any movement, if = 3 safety edge enabled only when opening, if = 4 safety edge enabled only while opening and before any movement; as for the obstacle detection with internal anti-crushing sensor, also the activation of the inputs SFT1 and SFT2 causes the complete or partial reversal as set by P055 (duration of inversion on obstacles while opening, and P056 (duration of reversal on obstacle while closing)	• 000: "safety edge always enabled • 001: "safety edge enabled only while closing • 002: "safety edge enabled only while closing and before any movement • 003: "safety edge enabled only when opening • 004: "safety edge enabled only while opening and before any movement	000	000	000	000
	068	SAFETY 2			000	000	000	000
	069		Delay on limit switch detection: the operation is stopped after 1,5 sec from limit switch detection. When during this delay a stop is detected, the operator is suddenly stopped	• 000: "limit switch delay disabled • 001: "limit switch delay enabled	000	000	000	000
	070		Adjustment of acceleration durability **Warning:** if soft start is activated, the acceleration is deactivated indipendently from P070 value.	• 000: "acceleration deactivated (it runs an acceleration of minimum durability, almost imperceptible) • 00X: "adjusts the acceleration durability at 1,5 sec (X*6 ms)	200	200	200	200

				TYPE 00	TYPE 01	TYPE 02	TYPE 03
OPERATING PARAMETERS	071	Safeties self-test: if = 0 24V ⎓ output with autotest disabled; if = 1 24V ⎓ output for safeties with self-test (it turn the output off and check the contact opening before each maneuver). **Attention:** In order to work in self-test mode, all devices must be connected to the stabilized output 24V_ST (1-2), and be wired and aligned before the motor stroke learning (P003).	• 000: “net power supply (safeties self-test disabled) • 001: “safeties self-test enabled	000	000	000	000
	072	Activation of SAS function **(with NET_EXP only)**: SAS output is connected to an input STOP / SAS INPUT of a second control panel, causing the operation “trap man” (disabling the opening of the second door as long as the first is not completely closed). If this parameter is enabled after a reset, it performs an automatic RESP during which the SAS output is not activated. If limit switches are present and they are crushed after a reset, the RESP is not executed. **Warning**: if both doors are manually unlocked and moved from the closed position creates the interlock condition. You will then need to manually close at least one of the two doors.	• 000: “SAS function” deactivated • 001: “SAS function” activated	000	000	000	000
	073	Unused parameter		/	/	/	/
	074	Unused parameter		/	/	/	/
	075	Unused parameter		/	/	/	/
	076	Unused parameter		/	/	/	/
	077 ... 099	**Configuration parameters dedicated to the expansion card NET_EXP (for a detailed description of the parameters, refer to the instruction manual).**		/	/	/	/

8 MESSAGES SHOWN ON THE DISPLAY

WORKING STATUS MESSAGES	
Mess.	*Description*
----	Gate is closed
JL	Gate is opened
OPEn	Opening under way
CLOS	Closing under way
StEP	While in step-by-step mode, the control board awaits further instructions after a start command
bLOC	Stop command received
rESP	Reset current position: The control unit has just been turned on after a power failure, or the gate has exceeded the maximum number (80) of inversions allowed without ever getting to the closing stroke, or the maximum number (3) of consecutive operations allowed of the anti- crushing device. Once the control unit has been reset and open command given the gate will start moving at slow speed, until it reaches end of travel.

ERROR MESSAGES		
Mess.	*Description*	*Possible solutions*
ErrP	Error position: The reset position procedure is not successful. The control panel is awaiting commands.	- Make sure there are no specific frictions and / or obstacles during the run; - Give a start pulse to initiate a position reset procedure; - Verify that the operation is completed successfully, manually helping the run, if necessary; - Adjust power and speed settings if necessary.
Err3	External photocells and/or safety devices are activated or out of order.	- Make sure that all safety devices and/or photocells installed are working properly.
Err4	Possible failure to the control board power circuit.	- Disconnect and connect power supply. Give a start impulse, if this error appears again, replace the control board.
Err5	Time-out operators run: The engine/s exceeded the maximum operating time (4min) without ever stopping.	- Give a start pulse to start the position reset procedure; - Ensure that this operation is successful.
Err6	Time-out obstacle detection: With anti-crushing sensor disabled, was still detected the presence of an obstacle that prevents movement of the leaf for a period of 10 seconds more.	- Make sure there are no specific frictions and / or obstacles during the run; - Give a start pulse to initiate a position reset procedure; - Verify that the operation is completed successfully.
Err7	Operators mouvement not detected.	- Make sure that operators and encoders connections are well done. - Check that jumpers J5 and J9 are well positioned as shown on the electric wiring. - If this error appears again, replace the control panel.
Err9	Communication with external memory card (also NET_EXP) missing / broken.	- Check that the connecting cable of the external memory card is connected properly. - If you are performing a data transfer operation (DOWNLOAD / UPLOAD), make sure that it is not interrupted (eg by unplugging the card before the end of the operation). **Please note**: the interruption of an UPLOAD, also involves a total RESET of the control unit.

9 INSTALLATION TEST

The testing operation is essential in order to verify the correct installation of the system. **DEA** System wants to summarize the proper testing of all the automation in 4 easy steps:

- Make sure that you comply strictly as described in paragraph 2 “WARNINGS SUMMARY”;
- Test the opening and closing making sure that the movement of the leaf match as expected. We suggest in this regard to perform various tests to assess the smoothness of the gate and defects in assembly or adjustment;
- Ensure that all safety devices connected work properly;
- Perform the measurement of impact forces in accordance with the standard 12445 to find the setting that ensures compliance with the limits set by the standard EN12453.

10 PRODUCT DISPOSAL

WARNING In compliance with EU Directive 2002/96/EC on waste electrical and electronic equipment (WEEE), this electrical product should not be treated as municipal mixed waste. Please dispose of the product and bring it to the collection for an appropriate local municipal recycling.

EN

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