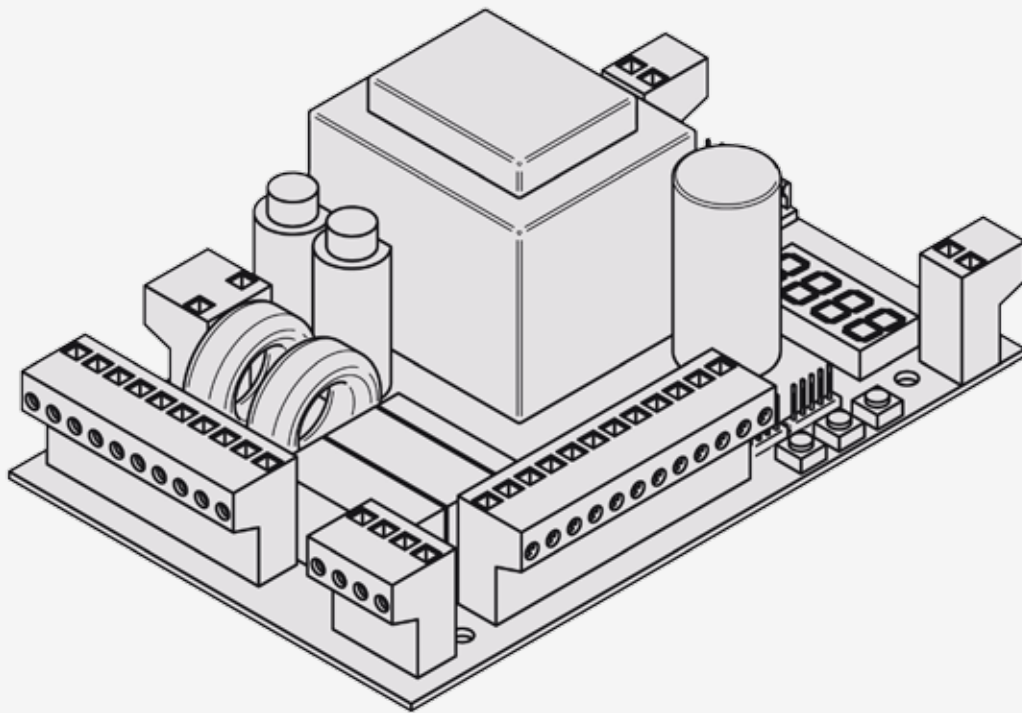




NET230N

Operating Instructions

NET230N

Universal control panel for 230V operators

Operating instructions and warnings

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NE

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.

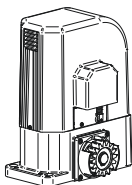
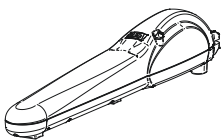
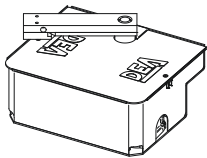
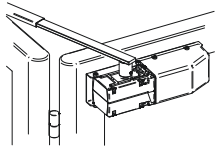
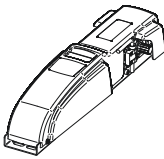
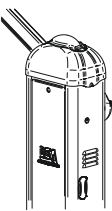
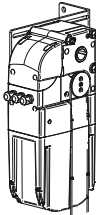
2 PRODUCT DESCRIPTION

NET230N is a universal control panel for **DEA** System 1 or 2 230V 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	TYPE 04
	LIVI 6NET LIVI 9NET GULLIVER REV	GHOST 100 / 200 LOOK - MAC OLI LIVI 500P LIVI 502 (R/EN) 550PL	LIVI 902 (R/EN/F)	PASS STOP	LATO 220
Power supply (V)	230 V ~ ±10% (50/60 Hz)				
Fuse F2 (A)	5A				
Fuse F1 (A)	160mA				
Outputs 230V motors (maximum output current) (W)	2 x 600W				
Auxiliaries power supply output	24 V ~ max 200mA				
"Warning" output	230 V ~ max 150W				
Electric lock output	max 1 art. 110 or 24V === output max 5W configurable				
230V Flashing light output	230 V ~ max 40W				
24V Flashing light output	24 V === max 100mA (for led flashing light) art. LED24AI or open gate warning light/courtesy light				
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				

				
Livi 6NET - Livi 9NET REV - Gulliver	Look - Mac - Oli	Livi 500 (R/EN) Livi 502 (R/EN)	Ghost 100 - Ghost 200	Livi 550PL
			* If you are not using DEA operators, set the parameter "Selection type of operator" to the closer value as family type and performances	
Livi 902 (R/EN/F)	Pass - Stop	LATO 220		

4 CONFIGURATION OF THE CONTROL PANEL

The universal control unit NET230N 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**).

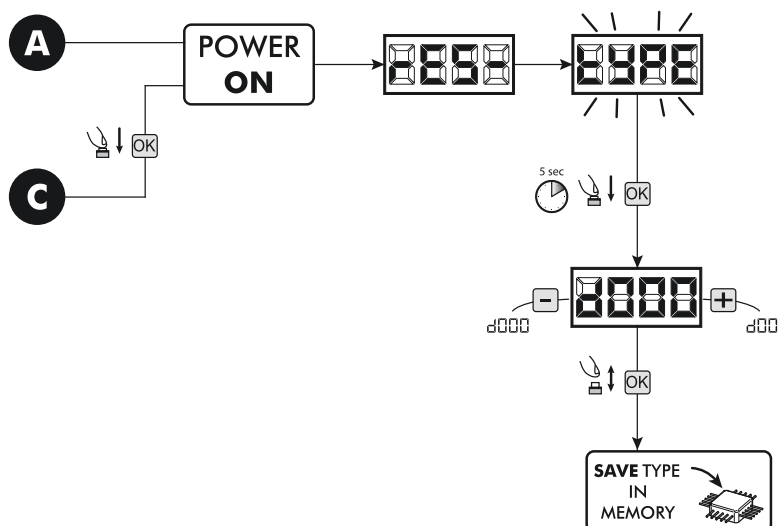
If necessary the TYPE of configured closing can be later adjusted following diagram **C**.

FIRST CONTROL BOARD IGNITION

Configuration after the first ignition

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

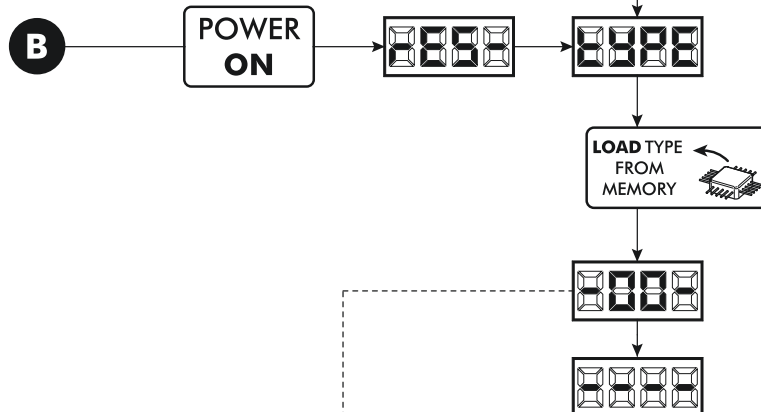
1. Apply power, the display shows in sequence the writing "r-ES-" and "TYPE" flashing;
2. Press the **OK** button and hold for 5 seconds until the display shows d000 on the display;
3. Acting on the **+** and **-** keys, select the desired configuration depending on the type of installation (es. d002) 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 "r-ES-", "TYPE", "-00-" followed by the symbol of closed gate "----".



Modify the existing configuration

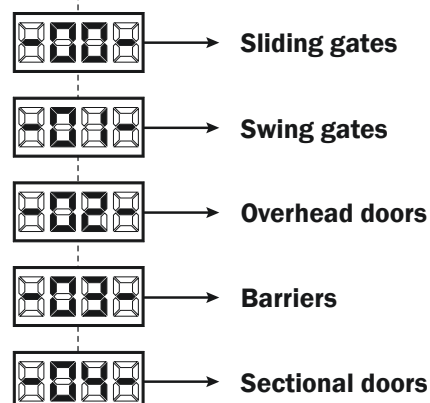
C If you have already saved a configuration and you want to change it, proceed as follows:

1. Hold down the **OK** button and give power, the display shows in sequence the writing "r-ES-" 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 $\pm$ 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 3x0,22mm².

Table 1 “terminal board connections”

1-2		230 V ~ ±10% (50/60 Hz) power supply input						
3-4-5			Operator 1 output 230 V ~ max 600W					
6-7-8			Operator 2 output 230 V ~ max 600W (if present)					
9-10			230 V ~ max 150 W output for open gate fix warning light (if P052=0) or courtesy light (if P052>1)					
11-12			Flashing light output 230 V ~ max 40W					
13-14			13 (-)	“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 (if P062=5) or temporized output (if P062>5).				
			14 (+)					
15-16				Output 24V === max 100mA; by selecting the FL/WL jumper, you can get a clone of the 230 Flash output as a 24V (if set FL) or as a Warning output (if set WL). Warning: the output capacity allows to use LED flashing lights only.				
								
			TYPE 00	TYPE 01	TYPE 02	TYPE 03	TYPE 04	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					
17	Input 6	014 (FCC 1)	011 (STOP)	000 (NONE)	000 (NONE)	014 (FCC 1)		
18 - Com		N.C.	N.C.	N.O.	N.O.	N.C.		
19	Input 5	012 (FCA 1)	009 (PHOTO 2)	000 (NONE)	000 (NONE)	012 (FCA 1)		
20 - Com		N.C.	N.C.	N.O.	N.O.	N.C.		
21	Input 4	008 (PHOTO 1)	008 (PHOTO 1)	011 (STOP)	000 (NONE)	011 (STOP)		
22 - Com		N.C.	N.C.	N.C.	N.O.	N.C.		
23	Input 3	010 (SAFETY)	010 (SAFETY)	010 (SAFETY)	000 (NONE)	000 (NONE)		
24 - Com		N.C.	N.C.	N.C.	N.O.	N.O.		
25	Input 2	002 (PED.)	002 (PED.)	008 (PHOTO 1)	008 (PHOTO 1)	008 (PHOTO 1)		
26 - Com		N.O.	N.O.	N.C.	N.C.	N.C.		
27	Input 1	001 (START)	001 (START)	001 (START)	001 (START)	001 (START)		
28 - Com		N.O.	N.O.	N.O.	N.O.	N.O.		
29		Aerial signal input						
30		Ground aerial input						
31-32			24 V ~ max 200mA power supply output for auxiliary devices					

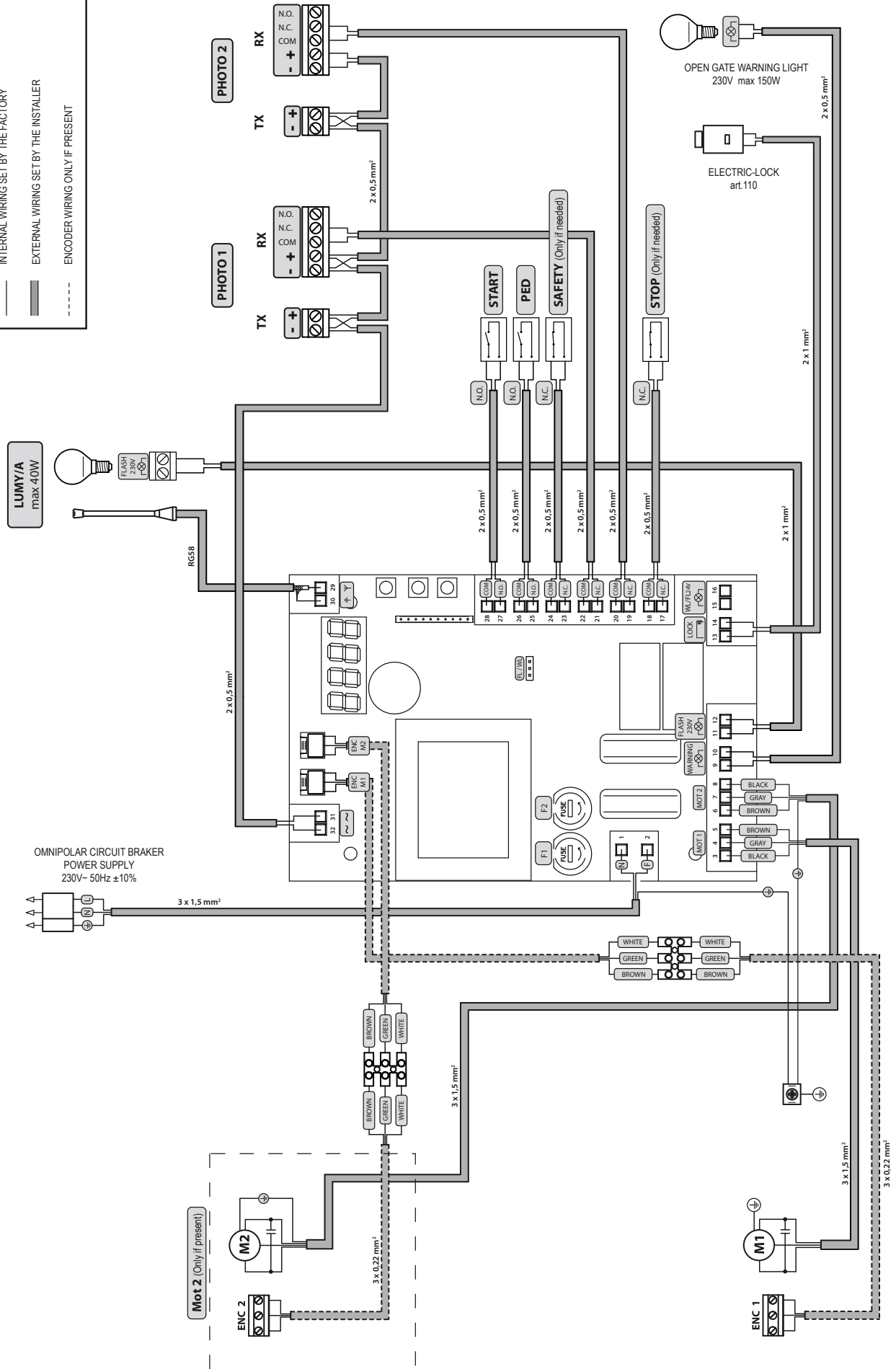
If the installation requires different commands and / or additional to the standard, you can configure each input to the required rate.
Refer to Chapter “Advanced Programming”.

INTERNAL WIRING SET BY THE FACTORY
EXTERNAL WIRING SET BY THE INSTALLER

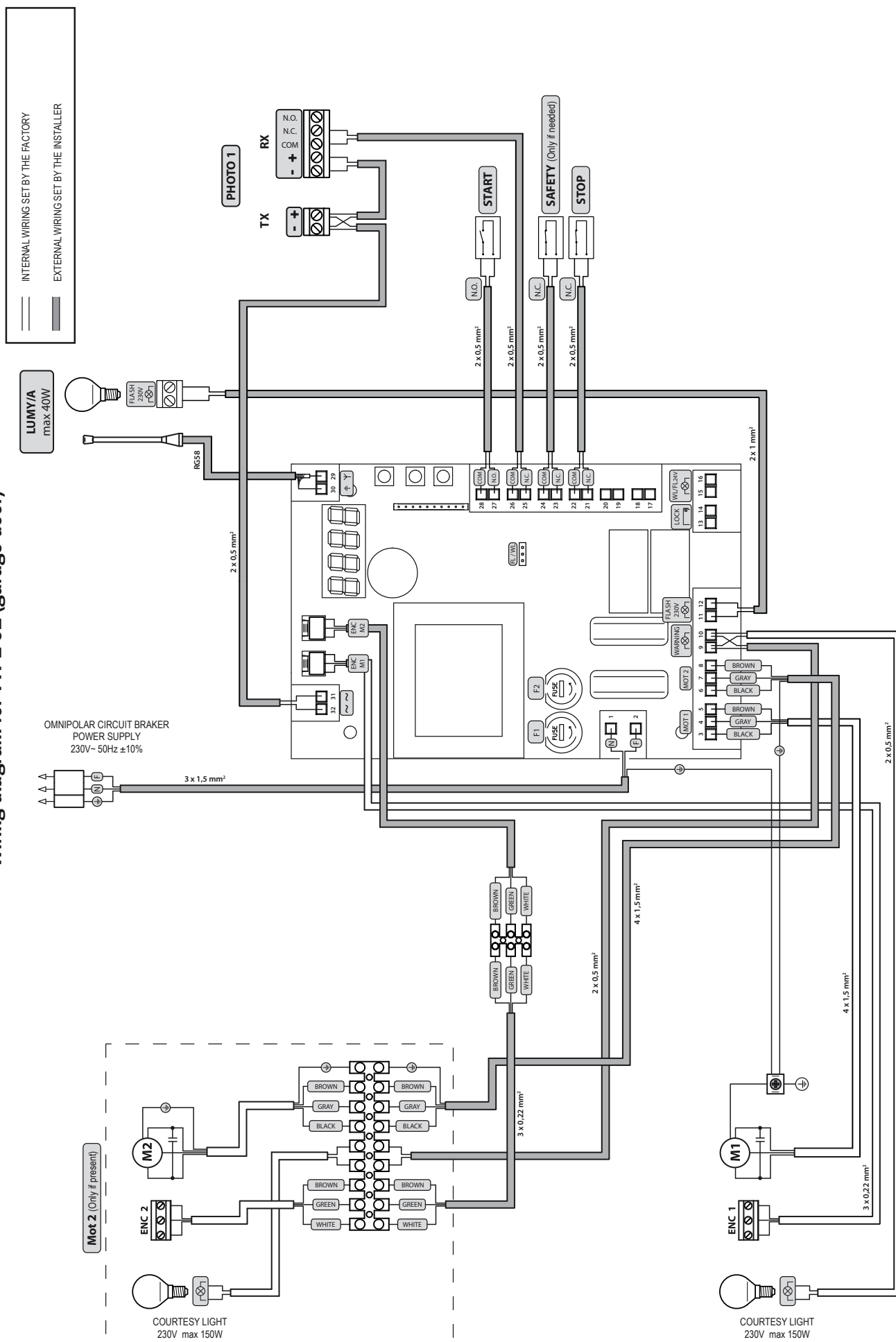


Wiring diagram for TYPE 01 (swing gate)

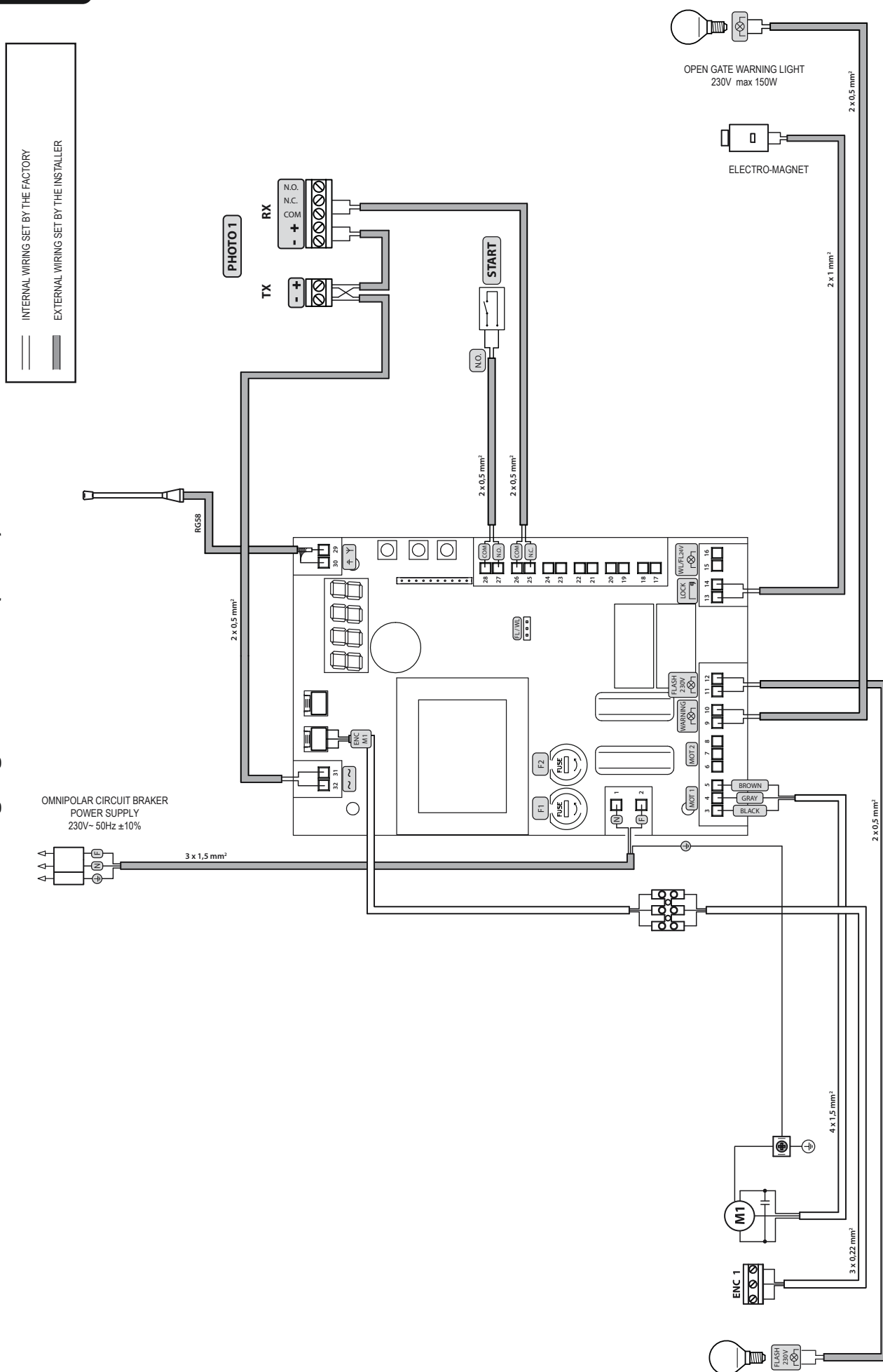
INTERNAL WIRING SET BY THE FACTORY
EXTERNAL WIRING SET BY THE INSTALLER
ENCODER WIRING ONLY IF PRESENT



Wiring diagram for TYPE 02 (garage door)



Wiring diagram for TYPE 03 (barrier)



INTERNAL WIRING SET BY THE FACTORY

EXTERNAL WIRING SET BY THE INSTALLER

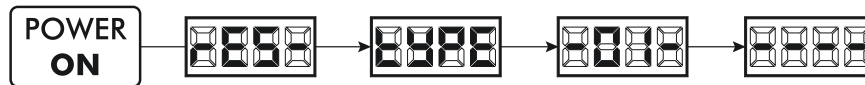


6 STANDARD PROGRAMMING

WARNING For reversible motors with electromagnetic brake, remember to set P062=3.

1 Power Supply

Give power supply, the display shows the following symbols "rES-", "tYPE", "-0 1-" (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 40).

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);



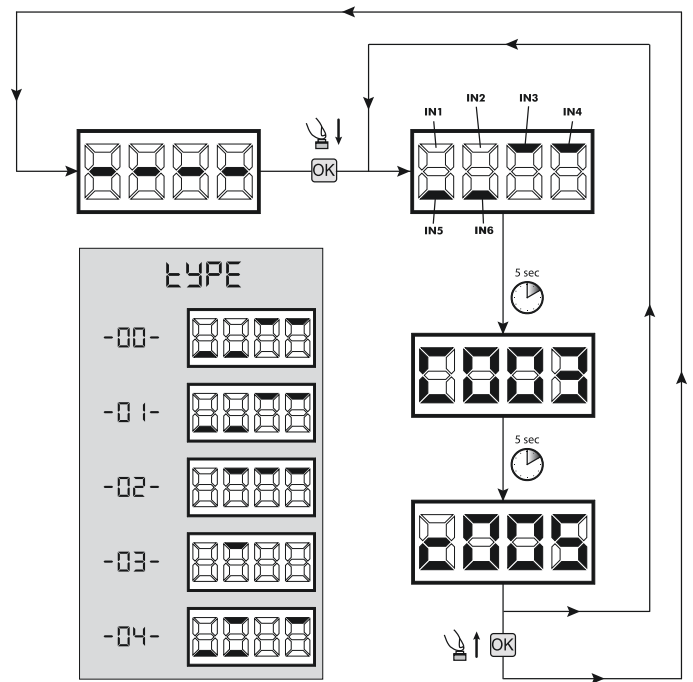
Total operations counter (* see P064):

i.g.: $\overline{000} = 3 \times 100 = 3000$ operations performed

Maintenance operations-counter (* see P065):

i.g.: $\overline{005} = 5 \times 500 = 2500$ operations remaining before the maintenance intervention request ($\overline{000}$ = 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 !

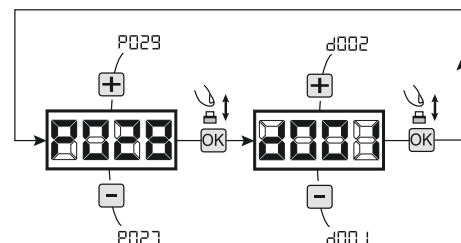
1. Scroll down the parameters with **+** and **-** keys until you visualise P028;
2. Access the parameter by pressing the **OK** key;
3. Acting on **+** and **-** keys, set:

Type 00	Type 01	Type 02	Type 03	Type 04
• 005 6NET • 006 9NET • 007 Gulliver - Rev	• 001 Look - Mac • 002 Ghost • 003 Livi 500 - 500MT - 502 - 502EN - 550PL • 004 Livi 500P - 500MT/RF - 502R - 502R/EN - 502L • 005 Oli	• 003 Livi 902EN • 004 Livi 902R - 902R/EN/F	• 003 Pass • 004 Stop	• 000 Lato

Warning: Selecting the OLI operators, all indicated values related to the operator force (P037 - P038 - P039 - P040), are automatically set to 100% without any possibility of change. For this type of operator, the obstacle detection is not active and the adjustment of the thrust force can be executed acting on the operator valves only.

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 22).

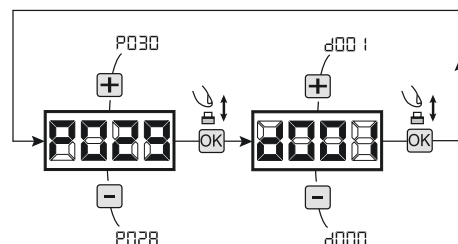
4. Confirm your choice by pressing the **OK** key (display returns again to P028).



4 Selection operating with or without encoder

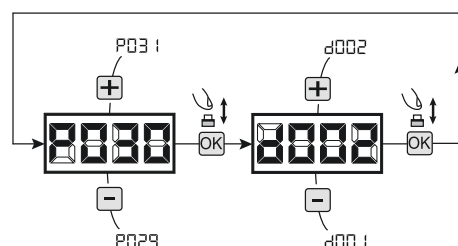
! IMPORTANT !

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 (Slow down is activated);
 - d002=for operators without encoder (Slow down not activated);
4. Confirm your choice by pressing the **OK** key (display returns again to P029).



5 Selection 1 or 2 operators functioning

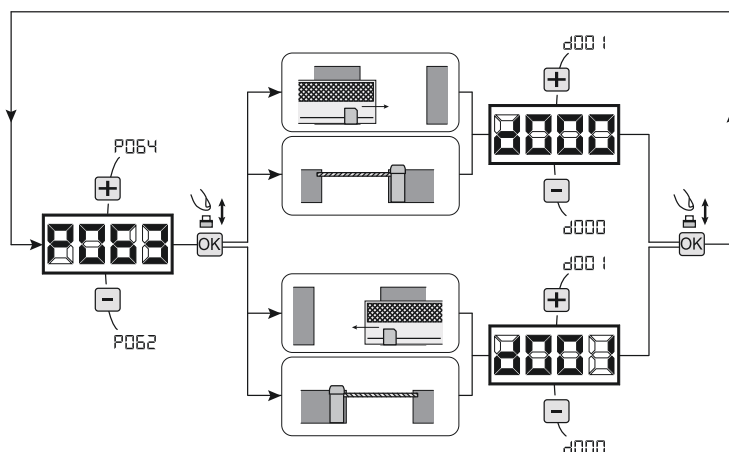
1. Scroll down the parameters with **+** and **-** keys until you visualise P030;
2. Access the parameter by pressing the **OK** key;
3. Acting on **+** and **-** keys, set:
 - d001=for a single motor operating;
 - d002=for 2 motors operating;
4. Confirm your choice by pressing the **OK** key (display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



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

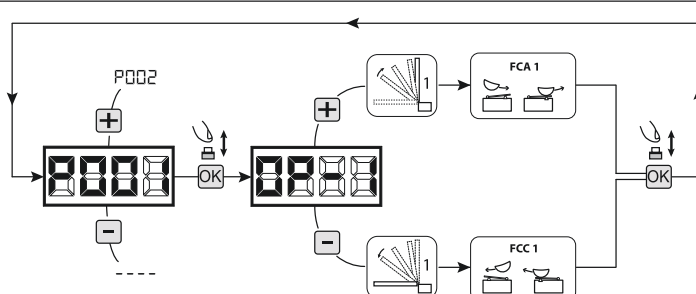
1. Scroll down the parameters with **+** and **-** keys until you visualise P063;
2. Access the parameter by pressing the **OK** key;
3. Acting on **+** and **-** keys, set:
 - d000=motor in standard position;
 - d001=motor in inverted position;
4. Confirm your choice by pressing the **OK** key (display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

1. Scroll down the parameters until 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).



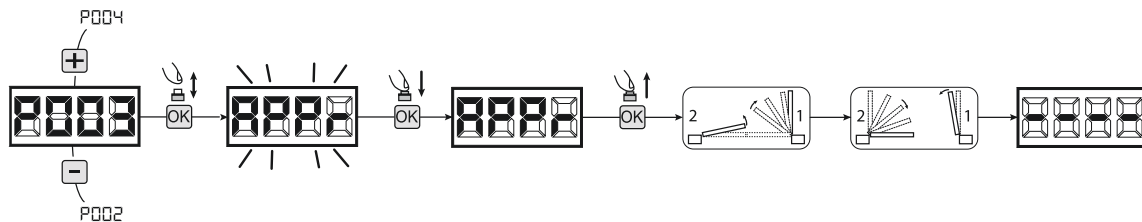
WARNING If the Operator 2 is present, repeat the previous settings using P002.

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 "PPP" flashes, continue pressing the **OK** key;
 4. Release the **OK** key when "PPP" 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.

Warning: For operators without encoder, the stroke is not detected, so it **MUST** be simulated both while opening and while closing (for both operators) by pressing the **OK** key.

6. Once the procedure is ended, the display will show "----".

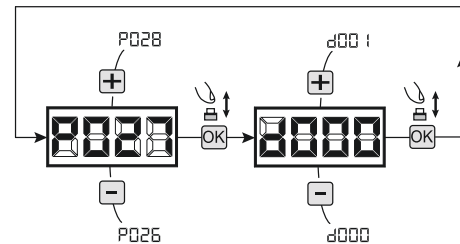


WARNING (only Type 01 and Type 03) Once you have executed the learning stroke, operate a complete cycle (opening/closing) and then check the manual release to make sure it is working properly. If it's to "hard" increase the value of P057 of 1 or more.

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).

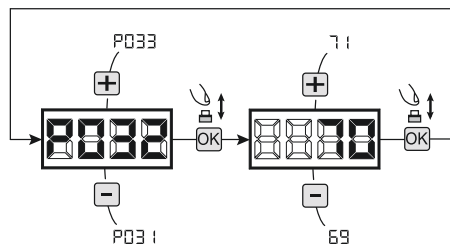


10 Adjustment of operating parameters

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

1. Scroll down the parameters until you visualize the desire parameter (i.g. 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. 37.



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 34.

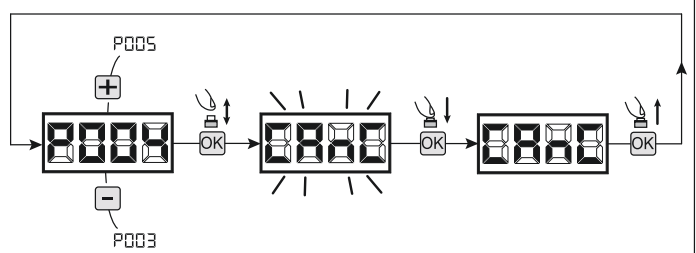
7 ADVANCED PROGRAMMING

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

1 Deletion of memorized transmitters

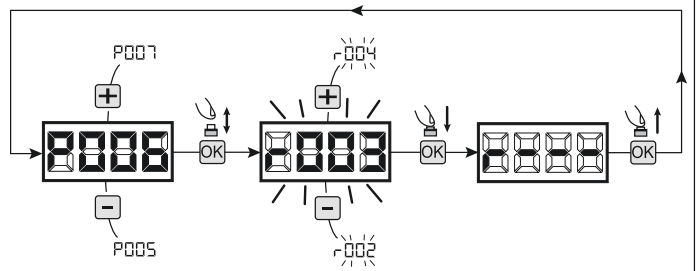
1.1 Deletion of all transmitters

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



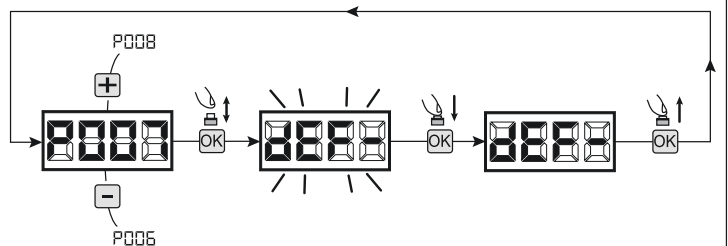
1.2 How to search and delete a transmitter

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. r 003);
4. When "r 003" 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

1. Scroll through the parameters with the buttons **+** and **-** until the display shows P007;
2. Confirm by pressing on the **OK** key;
3. When "d E F -" is flashing, press the **OK** key for a few seconds;
4. Release the **OK** key as soon as "d E F -" stops flashing; Default parameters for the configuration currently in use are restored;
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).

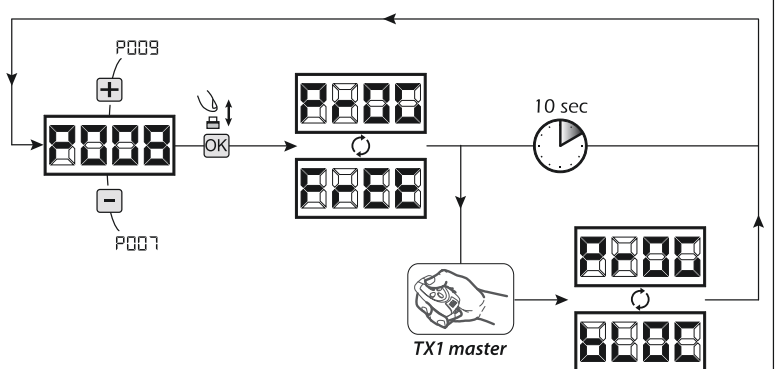
Warning: For reversible motors with electro-brake, remember to set P062 = 3 at the end of the procedure.

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.

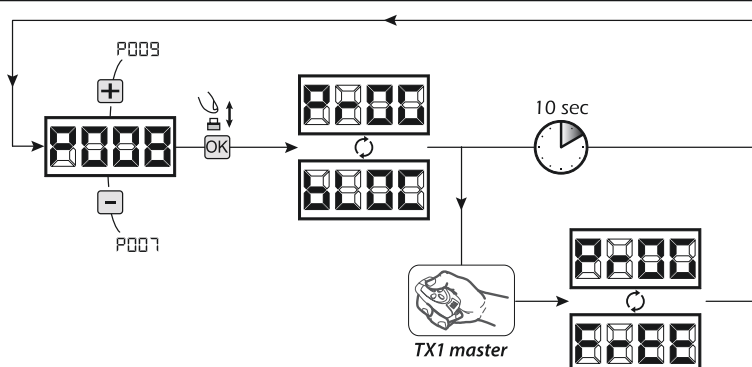
3.1 Locking access to programming

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 P-00 / F-EE 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 P-00 / bL 00 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 $\oplus$ and $\ominus$ until the display shows P008;
2. Access the parameter by pressing the button OK ;
3. The display shows alternately the writing $\text{Pr} \square\square / \text{bL} \square\square$ 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 $\text{Fr} \square\square / \text{Fr} \square\square$ before returning to the list of parameters;
5. Access to programming is unlocked.



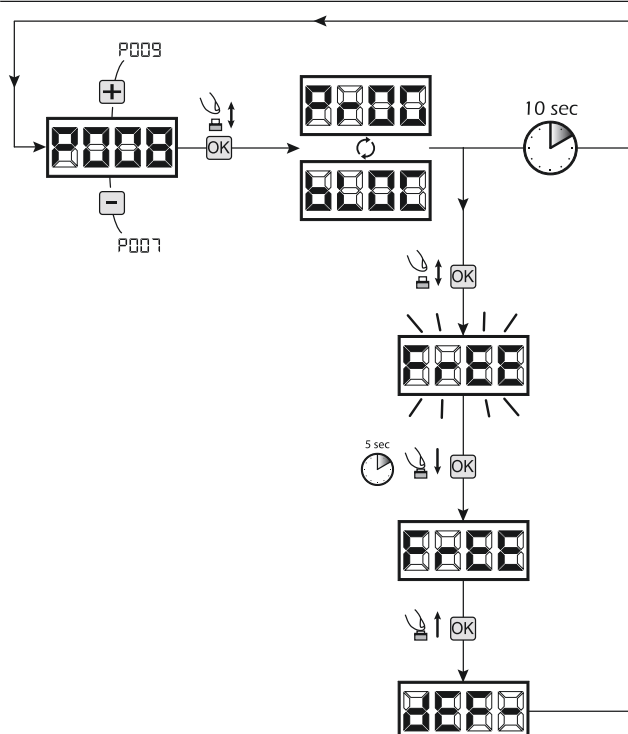
3.3 Unlocking access to programming and global reset

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.

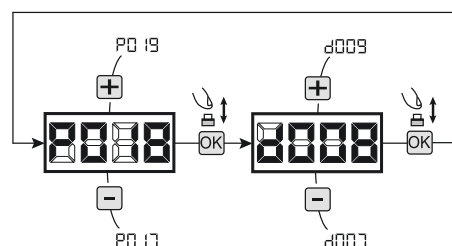
1. Scroll through the parameters with the buttons $\oplus$ and $\ominus$ until the display shows P008;
2. Access the parameter by pressing the button OK ;
3. The display shows alternately the writing $\text{Pr} \square\square / \text{bL} \square\square$;
4. Press the button OK , the display shows the flashing writing $\text{Fr} \square\square$;
5. Press the button again and hold for 5 seconds (releasing it before, the procedure is terminated): The display shows the fixed writing $\text{Fr} \square\square$ followed by dEF - , before returning to the list of parameters;
6. Access to programming is unlocked.



4 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 $\oplus$ and $\ominus$ 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 $\oplus$ and $\ominus$, keys to set the value corresponding to the desired operation (refer to table "Input Configuration parameters" on page 36);
4. Confirm by pressing on the OK key (display shows again P018).
5. Execute the new connection to the input just reconfigured.



5 Programming complete

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

PAR.	PROCEDURE	SETTABLE VALUES
P001	Positioning of operator 1	
P002	Positioning of operator 2	
P003	Memorization of the motors' stroke	
P004	Deletion of transmitters	
P005	Transmitters memorizing	
P006	Search and deletion of a transmitter	
P007	Restoring the operating parameters	
P008	Lock access to programming	
P009	How to learn connected DE@NET devices (unused at the moment)	
P010	Unused parameter	
P011	Unused parameter	
P012	Unused parameter	
P013	Unused parameter	
P014	Unused parameter	
P015	Unused parameter	

PROGRAMMING PROCEDURES

PAR.	PARAMETER DESCRIPTION	SETTABLE VALUES	DEFAULT VALUES (for different standards of installation)				
			TYPE 00	TYPE 01	TYPE 02	TYPE 03	TYPE 04
P015	INPUT_3 selectioning input type	• 000: IN3 type=free contact • 001: IN3 type=constant resistance 8K2	000	000	000	000	000
P017	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 (photo cell 1) • 009: PHOTO 2 (photo cell 2) • 010: SAFETY 1 (safety rib 1) • 011: STOP (lock) • 012: FCA1 (opening limit switches Mot1) • 013: FCA2 (opening limit switches Mot2) • 014: FCC1 (closing limit switches Mot1) • 015: FCC2 (closing limit switches Mot2) • 016: SAFETY 2 (safety rib 2)	001	001	001	001	001
P018	INPUT_2 operating selection		002	002	008	008	008
P019	INPUT_3 operating selection		010	010	010	000	000
P020	INPUT_4 operating selection		008	008	011	000	011
P021	INPUT_5 operating selection		012	009	000	000	012
P022	INPUT_6 operating selection		014	011	000	000	014

INPUTS CONFIGURATION PARAMETERS

		TYPE 00	TYPE 01	TYPE 02	TYPE 03	TYPE 04
INPUTS CONFIGURATION PARAMETERS	P023 Allocation of CHANNEL 1 of remotes	CH1 • 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)				
	P024 Allocation of CHANNEL 2 of remotes	CH2				
	P025 Allocation of CHANNEL 3 of remotes	CH3				
	P026 Allocation of CHANNEL 4 of remotes	CH4				
OPERATORS CONFIGURATION PARAMETERS	P027 Selection of type of remotes	• 000: HCS fix-code • 001: HCS rolling-code • 002: Dip-switch				
	P028 Selection type of operators Warning: Selecting the OLI operators, all indicated values related to the operator force (P037 - P038 - P039 - P040), are automatically set to 100% without any possibility of change. For this type of operator, the obstacle detection is not active and the adjustment of the thrust force can be executed acting on the operator valves only.	• 000: LATO • 001: LOOK - MAC • 002: GHOST 100/200 • 003: 500 - 500MT - 502 - 502EN - 902EN - PASS - 550PL • 004: STOP - 500P - 500MT/RF - 502R - 502R/EN - 502L - 902R - 902R/EN/F	• 005: 6NET - OLI • 006: 9NET • 007: GULLIVER - REV			
	P029 Selected work with or without encoders. WARNING: P029 must be set correctly before performing the procedure for programming	• 000: motors with encoder • 001: engines without encoder. Slow down is activated • 002: engines without encoder. Slow down not activated				
	P030 Selection of operators number	• 001: one operator • 002: two operators				
OPERATING PARAMETERS	P031 Operators speed adjustment during slow-down while opening	15%tot.....100%tot				
	P032 Operators speed adjustment during the stroke while opening	15%tot.....100%tot				
	P033 Operators speed adjustment during the stroke while closing	15%tot.....100%tot				
	P034 Operators speed adjustment during slow-down while closing	15%tot.....100%tot				
	P035 Slow down duration adjustment while opening	0%tot.....80%tot				
	P036 Slow down duration adjustment while closing	0%tot.....80%tot				
	P037 Operator 1 force adjustment while opening (if = 100% obstacle detection deactivated)	15%tot.....100%tot				
	P038 Operator n.1 force adjustment while closing (if = 100% obstacle detection deactivated)	15%tot.....100%tot				
	P039 Operator n.2 force adjustment while opening (if = 100% obstacle detection deactivated)	15%tot.....100%tot				
	P040 Operator n.2 force adjustment while closing (if = 100% obstacle detection deactivated)	15%tot.....100%tot				
	P041 Automatic closing times adjustment (if = 0 automatic closing deactivated)	Osec.....255sec				
	P042 Pedestrian automatic closing time adjustment (se = 0 pedestrian automatic closing deactivated)	Osec.....255sec				
	P043 Pedestrian stroke duration adjustment	5%tot.....100%tot				

		TYPE 00	TYPE 01	TYPE 02	TYPE 03	TYPE 04
P044	Pre-flashing time adjustment	Osec.....10sec	000	000	000	000
P045	Adjustment of phase displacement time while opening	Osec.....30sec	001	/	/	/
P046	Adjustment of phase displacement time while closing	Osec.....30sec	003	/	/	/
P047	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
P048	Ram blow function: it pushes the motors closed for one second before each opening movement, so as to ease the electric-lock release	• 000: "ram blow" deactivated • 001: "ram blow function" activated	000	000	000	000
P049	"Reversal" mode selection (during the manoeuvre a command impulse reverse the movement) or "step by step" (during the manoeuvre a command impulse stops the movement). A next impulse restart the operator to the opposite direction.	• 000: "reversal function" • 001: "step by step function"	000	000	000	000
P050	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).	• 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
P051	PHOTO 2 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: "fix warning light" • >001: "courtesy light" off delay (2sec.....255sec)	000	000	000	000
P052	Operation mode selection of the warning light output: If = 0 "fix warning light" (output always ON when the gate is open, OFF after a closing operation). If > 1 "courtesy light" (output ON during each movement, OFF when the motor stops, after the setting delay).	• 000: Stop when opening on a memorized point • 001: Stop when opening on the end of stroke	/	000	001	000
P053	Searches for end of stroke while opening too: when activated, operators stop only at their arrival at 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: "soft start" deactivated • 001: "soft start" activated • 002: "long soft start" activated	001	001	001	001
P054	"soft start" function: motors accelerate gradually until they reach the set speed, avoiding sudden departures. Warning: For operators without encoder, the parameter will be ignored.	• 000: complete reversal on obstacle • >000: duration of reversal on obstacle (1sec.....10sec)	000	000	000	001
P055	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
P056	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
P057	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	002	000
P058	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	020	025
P059	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	020	025

OPERATING PARAMETERS

		TYPE 00	TYPE 01	TYPE 02	TYPE 03	TYPE 04
P050	Operators force adjustment at stroke arrival - If=0, setting off (the force value on the stroke is calculated automatically) - If≠0 (operators with encoder) it indicates the force value (expressed in% of the max value) set in the last length - If≠0 (operators without encoder), max speed is activated during last length.	/	000	000	000	000
P051	Unused parameter	/	/	/	/	/
P052	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	000	000	005	000
P053	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	000	000	000	000
P054	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".	001	001	001	001	001
P055	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	000	000	000	000
P056	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).	001	001	001	001	001
P057	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	000	000	000	001
P058	SAFETY 2	000	000	000	000	001
P059	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	000	000	000	001
P070	Adjustment of acceleration durability Warning: If soft start is activated, the acceleration is deactivated independently from P070 value.	108	108	108	108	108
P071	Unused parameter	/	/	/	/	/
P072	Unused parameter	/	/	/	/	/
P073	Unused parameter	/	/	/	/	/
P074	Unused parameter	/	/	/	/	/
P075	Unused parameter	/	/	/	/	/

OPERATING PARAMETERS

8 MESSAGES SHOWN ON THE DISPLAY

WORKING STATUS MESSAGES		
Mess.	Description	
----	Gate is closed	
IL	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	
STOP	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 the setting of parameter P029 (Motor selection with or without encoder) and make sure it is correct. - If this error appears again, replace the control panel.

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.



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