GULLIVER

Electromechanical operators for sliding gates
Operating instructions and warnings

Index

EN

1 WARNINGS SUMMARY

WARNING! IMPORTANT SAFETY INSTRUCTIONS. CAREFULLY READ AND FOLLOW ALL WARNINGS AND INSTRUCTIONS THAT ACCOMPANY THE PRODUCT SINCE INCORRECT INSTALLATION COULD CAUSE HARM TO PEOPLE, ANIMALS OR THINGS. WARNINGS AND INSTRUCTIONS PROVIDE IMPORTANT INFORMATION REGARDING SAFETY, INSTALLATION, USE AND MAINTENANCE. KEEP THE INSTRUCTIONS TOGETHER THE TECHNICAL DOCUMENTATION AND FOR FUTURE REFERENCE.

⚠ **WARNING** The device may be used by children of less than 8 years of age, people with reduced physical, mental or sensory impairment, or generally anyone without experience or, in any case, the required experience provided the device is used under surveillance or that users have received proper training on safe use of the device and are aware of the dangers related to its use.

⚠ **WARNING** Do not allow children to play with the device, the fixed commands or the radio controls of the system.

⚠ **WARNING** Product use in abnormal conditions not foreseen by the manufacturer may generate hazardous situations; meet the conditions indicated in these instructions.

⚠ **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), 2014/30/UE (electromagnetic compatibility), 2014/35/UE (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 use the device in an explosive atmosphere or in areas that may be corrosive or could damage product parts. Check that the temperatures at the installation site are suitable and comply with the temperatures declared on the product label.

⚠ **WARNING** When working with the "dead man" switch, make sure that there are no pe-

⚠ **WARNING** Check that there is a switch or an omni polar magneto-thermal circuit breaker that enables complete disconnection in case of over voltage category III conditions installed upstream from the power system.

⚠ **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** If the power cable is damaged, it must be replaced by the manufacturer or its technical assistance service or, in any case, by a person with similar qualifications to prevent any risk.

⚠ **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 standard**s and** regulations in force in the nation of installation.

Cleaning and maintenance destined to be performed by the user must not **be** performed by unsupervised children.

⚠ **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** Changing the closing intensity could lead to dangerous situations. Therefore, qualified personnel should only perform increases to the closing force. After adjustment, compliance with regulatory limits values should be detected with a force impact-measuring instrument. The sensitivity of the obstacle detection may be adjusted gradually to the door (see programming instructions). The anti-crushing device operation must be checked after each manual adjustment. Manual modification of the force can only be done by qualified personnel by performing the measurement test according to EN 12445. Modifications to the force adjustment must be documented in the machine manual.

⚠ **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 2012/19/EU 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.

EVERYTHING THAT IS NOT EXPRESSLY PROVIDED FOR IN THE INSTALLATION MANUAL IS NOT ALLOWED. CORRECT OPERATOR OPERATION IS ONLY ENSUED WHEN THE REPORTED DATA IS RESPECTED. THE COMPANY DOES NOT RESPOND FOR DAMAGE CAUSED BY FAILURE TO COMPLY WITH THE INSTRUCTIONS CONTAINED IN THIS MANUAL. WITHOUT AFFECTING THE ESSENTIAL FEATURES OF THE PRODUCT, THE COMPANY RESERVES THE RIGHT TO MAKE ANY CHANGES DEEMED APPROPRIATE AND AT ANY TIME IN ORDER TO TECHNICALLY, STRUCTURALLY AND COMMERCIALLY IMPROVE THE PRODUCT WITHOUT BEING REQUIRED TO UPDATE THIS DOCUMENT.

2 PRODUCT DESCRIPTION

Models and contents of the package

The name GULLIVER identifies a series of electromechanical operators for industrial sliding gates with different features as to motor and control board power supply voltage, capacity, mechanical adjustment of force and built-in limit switch.

GULLIVER is completed by a set of accessories listed in the "PRODUCT ACCESSORIES" table (page 182). This operator is eomposed of a mechanical gear motor which rotates the driving gear; This gear, coupled to the rack properly installed on the gate, converts the circular motion of the gear motor into rectilinear motion thus allowing the movement of the gate on its own guide.

Inspect the "Contents of the Package" (Pic. 1) and compare it with your product for useful consultation during assembly.

Transport

GULLIVER is always delivered packed in boxes that provide adequate protection to the product, however, pay attention to all information that may be provided on the same box for storage and handling.

3 TECHNICAL DATA

OPERATOR		
	18NET - 18NET/M - 18NET/IB - 1503E	25RRT - 22RRTF - 22RRT/M - 25RRT/IB
Motor power supply voltage (V)	230 V ~ ±10% (50/60 Hz)	400 V ~ ±10% (50/60 Hz)
Absorbed power (W)	560	1200
Max Thrust (N)	1300	1650
Duty cycle (cycles/hour)	15 (leaf L=12m)	17 (leaf L=14m)
Maximum n° of operations in 24 hour	240	280
Built-in capacitor (µF)	30	-
Operating temperature range (°C)	-20 ÷ 50 °C	
Motor thermal protection (°C)	140 °C	-
Opening speed (m/min)	10	10
Weight of product with package (Kg)	30	
Protection degree	IPX4	

CONTROL BOARD		
	NET230N	
Power supply (V)	230 V ~ ±10% (50/60 Hz)	
Fuse F2 (A)	5A	
Fuse F1 (A)	160mA	
230V operators outputs	2 x 600W	
Auxiliaries power supply output	24 V ~	(24V_AUX + 24V_ST = **max 200mA**)
Safety devices power supply output	24V ⎓	
"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	

4 INSTALLATION AND ASSEMBLY

4.1 For a satisfactory installation of the product is important to:

- Ensure that the facility complies with current regulations and then define the full project of the automatic opening;
- Ensure that throughout the course of the gate, while opening and closing, there are no friction points;
- Ensure that there is no danger of derailment and that there are not risks that it goes out of the guides;
- Make sure the gate is in equilibrium: it must not move if it stays in any position;
- Ensure that the mounting area of the motor allows the release and a manual operation easier and safer;
- Ensure that the mounting positions of the various devices are protected from impacts and the surfaces are sufficiently robust;
- Do not allow the automation parts are immersed in water or other liquids.

4.2 Defined and satisfied these prerequisites, proceed to the assembly:

If the supporting plane is already available, the fixing of the motor must be done directly on the surface using, for example screw anchors or chemical means.

Alternatively, proceed as follows:

- Make a hole appropriate to the type of land by using as a reference the measurements shown in Fig 3;
- Provide an adequate number of channels for the passage of electrical cables;
- Place the base of the foundation;
- Start casting of concrete and, before you start taking, bringing the base plate to the dimensions shown in Figure 4, making sure that is parallel to the gate wing and perfectly level. Wait for the complete setting of the concrete.

If the rack is already present, **place the pinion at a distance of 1-2 mm** in order to avoid that the weight of the wing **could burden on the gear motor (Fig. 5). To do this, adjust the height of GULLIVER shimming** the base in an appropriate manner and then **tighten the locking screws in a robust way (Fig. 6).**

Alternatively, proceed as follows:

- Unlock the motor and fully open the door;
- Place the first section of the rack on the wing, making sure that the start of the rack corresponds to the top of the wing. Then attach the rack to the leaf keeping a game of 1-2 mm from the pinion (Fig. 5);
- Cut off the excess part of the rack;
- Finally, move the door manually several times and verify that the alignment and the distance of 1-2 mm between the rack and pinion is respected throughout the length;
- Tighten the locking screws of GULLIVER in a robust way (Fig. 6) and cover with plastic caps.

4.3 How to unlock the operator

Once you open the lock on the handle (protected by a plastic cover), the lever must be turned in the direction shown in Fig. 7, at this point the operator is unlocked and the gate, in the absence of other obstacles is free in his movements. The reverse process, turn the lever until it stops and closing of the lock (remember to protect the lock with the proper cover), keeps GULLIVER in working condition.

4.4 Limit-switches

Adjustment of the limit-switches

Some GULLIVER models provides a limit-switch whose intervention must be adjusted for each installation. **DEA** System provides two limit switches cams (Fig. 8) that are installed on the rack of the gate and subsequently regulated in such a way as to ensure the functionality and safety distances in opening and closing of the gate.
Keep in mind that when the limit switches trigger, the door will move to another 2-3 cm, and it's therefore suggested to fix the end of stroke brackets at a sufficient distance from the mechanical stops.

Adjustment of the magnetic limit switch

Attach the mounting brackets to the magnets as shown in Figure 10, making sure to mount the **LIGHT BLUE** magnet at the closing limit switch, the **GREEN** magnet at the end of the opening limit switch (Fig. 11). Connect the cable of the magnetic sensor which is colored **BROWN** at the FCC 1 input (Closing Limit Switch 1) and the **BLACK** one at FCA 1 input (Opening Limit Switch 1) (Fig. 12);

WARNING Refer to control board instructions to correctly identify the limit switch inputs.

WARNING Incorrect installation of the magnets can be dangerous to people or things. Observe the conditions prescribed in these instructions.

Mount the magnetic sensor as shown in Fig. 9. The sensor must protrude from the bracket for supporting at least 35mm, in this way will avoid any interference.
Adjust the magnets support brackets so as to maintain a distance from the sensor between 10 and 20mm.

WARNING Opening and closing magnets positions are referred to a standard installation (sensor placed on the left of the gate). In case of use of the parameter P063 (NET control boards only) for an inverted installation (sensor on the right), the position of the magnets must not be changed.

In case of combination with the control panel art. 400RR, and only if you have to reverse the direction of travel of the geared motor, you will have to manually reverse the limit switch cables.

WARNING The electrical connections in this manual refer exclusively to the NET series control boards. If you are using GULLIVER with control board 212E or 400RR, please refer to the user manual of those control boards for all the wiring needed to startup the motor.

5 ELECTRICAL CONNECTIONS FOR 230V MODELS

Execute the wiring following the directions of "Table 1" and diagrams on page 28.

WARNING For adequate electrical safety, keep low safety voltage wires (controls, electro-locks, antenna, auxiliary power) clearly separate from 230V ~ power wires **(minimum 4 mm in air or 1 mm via supplementary insulation)** placing them in plastic raceways and securing them with adequate clamps near terminal boards.

WARNING For connection to the mains, use a multipolar cable having a minimum section 3x1,5 mm² and complying with the current regulations. For connecting the motors, use a minimum cross section 1,5 mm² cable and complying with the current regulations. As an example, if the cable is out side (outdoor), must be at least equal to H07RN-F, whereas if it (in a raceway), must be at least equal to H05VV-F.

WARNING All wires must be striped and unsheathed in the immediate vicinity of terminals. Keep wires slightly longer to subsequently eliminate any excess.

WARNING To connect the encoder to the control panel, use only a dedicated cable 3x0,22mm².

Tabella 1 "collegamento alle morsettiere"

1-2		230 V ~ ±10% (50/60 Hz) power supply input		
3-4-5	M1	Operator 1 output 230 V ~ max 600W		
6-7-8	M2	Operator 2 output 230 V ~ max 600W (if present)		
9-10	WARNING	230 V ~ max 150 W output for open gate warning light (if P052=0) or courtesy light (if P052>1)		
11-12	FLASH 230	Flashing light output 230 V ~ max 40W		
13-14	ELETTR	13 (-) / 14 (+)	"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).	
15-16	WL / FL24	FL / WL	Output 24V ⎓ max 100mA; by selecting the FL/WL jumper, you can choose the 230 Flash output as a 24V output (if the jumper is set to FL) or as a Warning light output (if jumper set to WL). **Warning:** the output capacity allows to use LED flashing lights only	
17-18	FCC 1	17 - N.C. / 18 - Com	Input 6 FCC 1. If it intervenes it stops M1 closing. **If unused, short circuit.**	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".**
19-20	FCA 1	19 - N.C. / 20 - Com	Input 5 FCA 1. If it intervenes it stops M1 opening. **If unused, short circuit.**	
21-22	PHOTO 1	21 - N.C. / 22 - Com	Input 4 PHOTO 1. When enabled (see parameter P050 in the table), activation of PHOTO 1 provokes: an inversion of direction (during closing), the arrest of the movement (during opening), prevent the start (gate closed). **If unused, short circuit.**	
23-24	SAFETY	23 - N.C. / 24 - Com	Input 3 SAFETY. If activated, it causes the inversion. See P055 and P056 on the parameters table. **If unused, short circuit.**	
25-26	PED	25 - N.O. / 26 - Com	Input 2 PED. If activated, it opens motor nr. 1 only.	
27-28	START	27 - N.O. / 28 - Com	Input 1 START. In case of intervention it provokes: the operator opening or closing. It may operate as "inversion" mode (P049=0) or "step by step" mode (P049=1).	
29	Y	Aerial signal input		
30	⏚	Ground aerial input		
31-32	+24VBLOK	24 V ~ power supply output for auxiliary devices		**(AUX + ST) = max 200mA**
33-34	+24V_ST	33 (+) / 34 (-)	24 V ⎓ power supply output for controlled safety devices	

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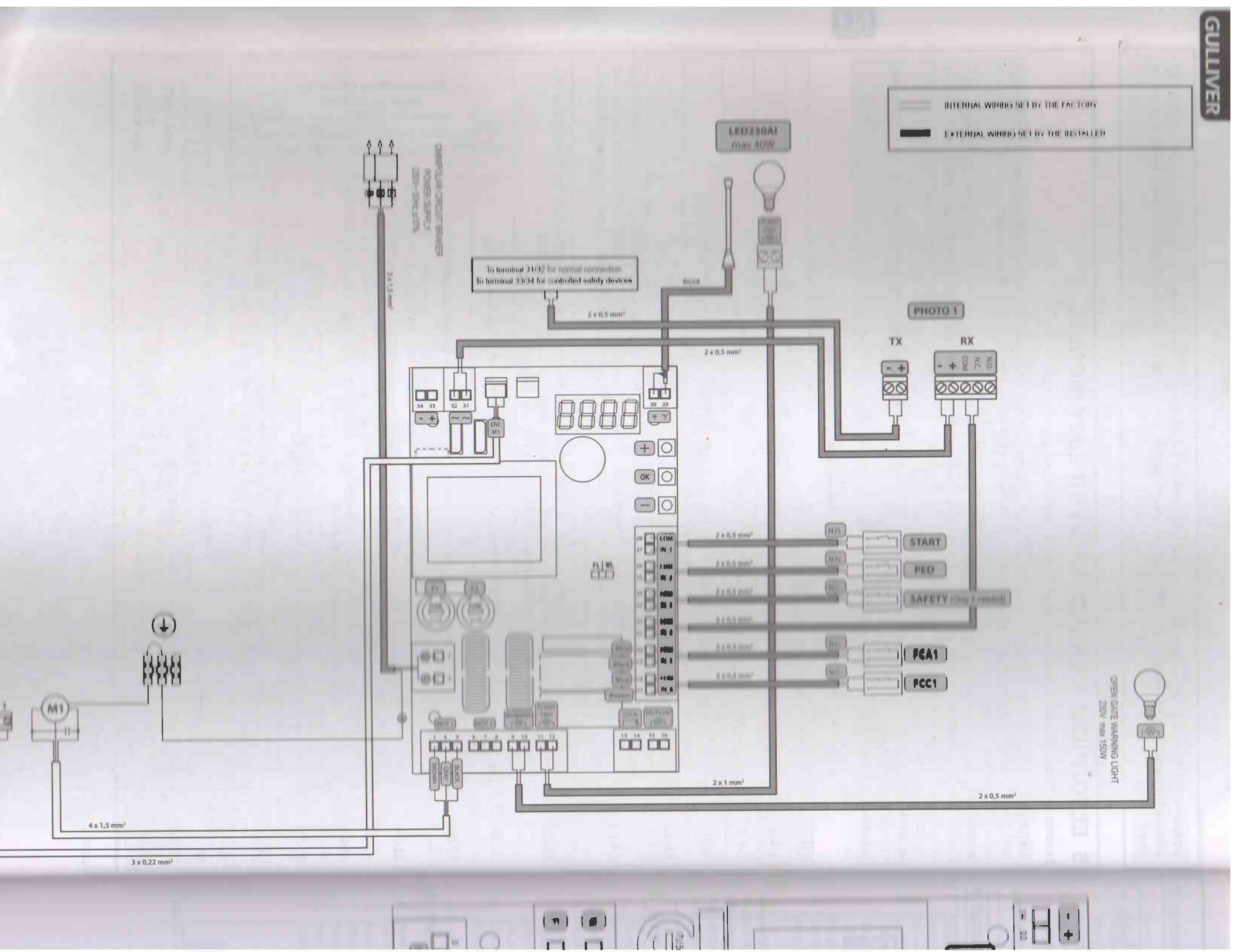
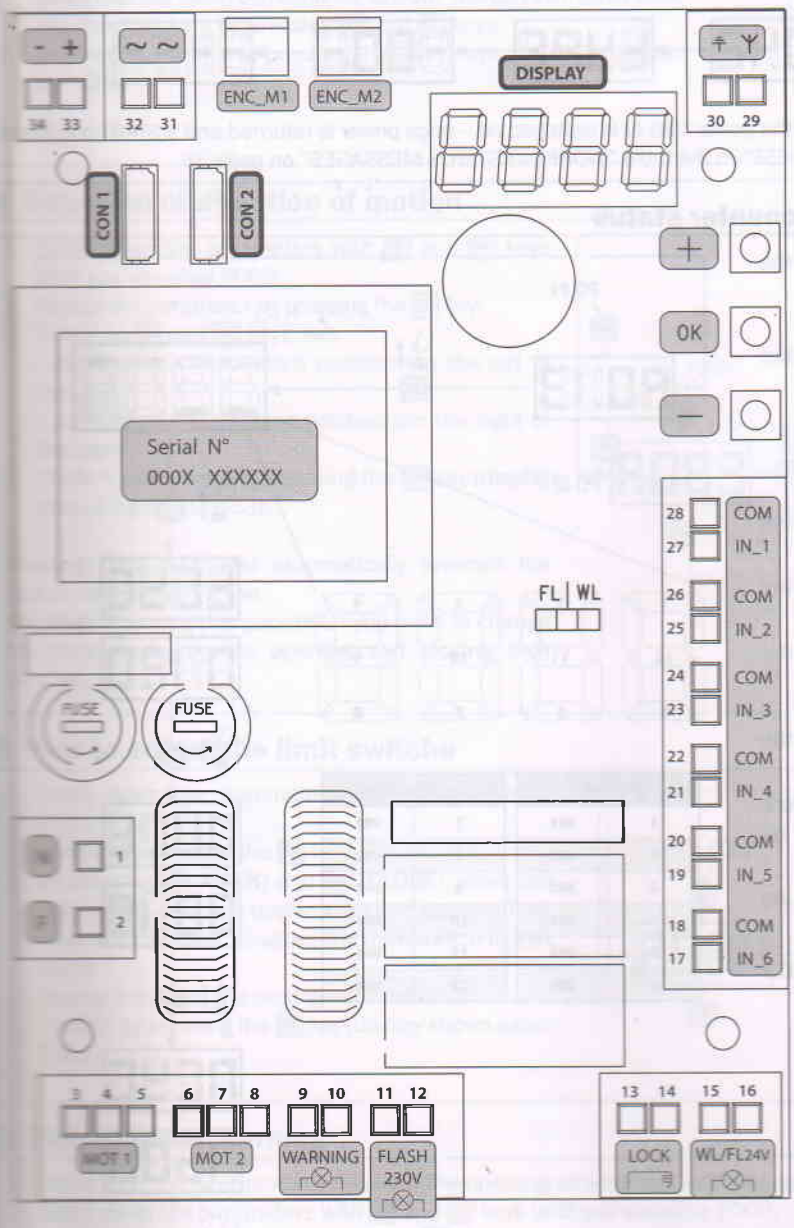
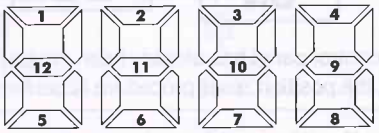

INTERNAL WIRING SET BY THE FACTORY
EXTERNAL WIRING SET BY THE INSTALLER
LED230AI
max 40W
To terminal 31/32 for normal connection
To terminal 33/34 for controlled safety devices
2 x 0,5 mm²
PHOTO 1
TX
RX
- +
- + COM N.C. N.O.
34 33
32 31
30 29
ENC M1
OK
COM
IN 1
IN 2
IN 3
IN 4
IN 5
IN 6
N.O.
START
PED
SAFETY (Only if needed)
FCA1
FCC1
M1
4 x 1,5 mm²
3 x 0,22 mm²
2 x 1 mm²
OPEN GATE WARNING LIGHT
230V max 150W

Basic scheme NET230N



DISPLAY



NET2XXN		NET_EXPANSION	
1	IN1	7	IN1
2	IN2	8	IN2
3	IN3	9	IN3
4	IN4	10	IN4
5	IN5	11	IN5
6	IN6	12	IN6

CON 1

NET-EXP

CON 2

NET-NODE / MEMONET

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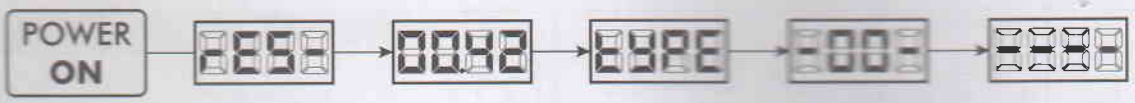
6 STANDARD PROGRAMMING

1 Power Supply

When turned on. "rES", "0042" (or the current firmware version) "TYPE". "--" or the selected Type) appear on the display in sequence followed by the closed gate symbol "----".



* 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 36.

2 Visualisation of inputs and operations-counter status

1. Scroll the parameters with the + and − keys until the screen reads P013:
2. Access the parameter by pressing the OK button;
3. The "Input Status" is shown on the screen (check that this is correct):

   OPEN CONTACT CLOSE CONTACT

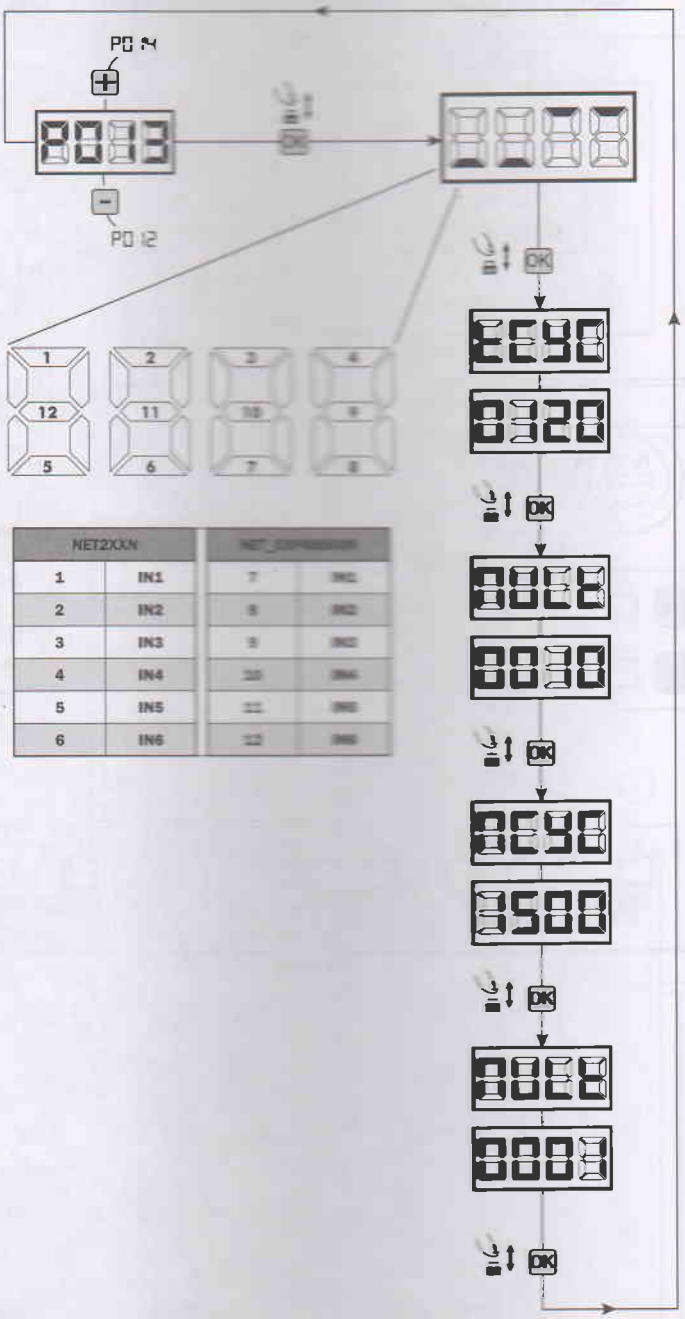
4. Press the OK button again;
5. The "Total Operation Counter" TCYC appears on the screen followed by the MULT multiplier.

   To calculate the number of completed operations, the two values must be multiplied.

   I.e.: TCYC = 120x10 = 1200 operations completed
6. Press the OK button again;
7. The "Total Maintenance Counter" MCYC appears on the screen followed by the MULT multiplier.

   To calculate the number of operations remaining before the maintenance request. the two values must be multiplied.

   I.e.: MCYC = 1500x1 = 1500 operations yet to be completed before the maintenance request
8. Press the OK button again to exit the parameters (P013 is shown on the screen again).

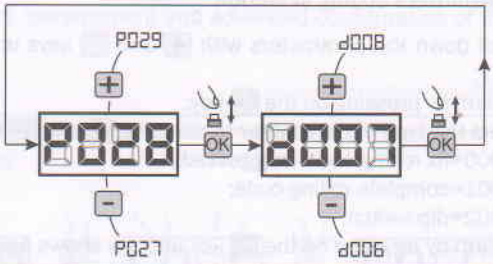


NET2XXN			
1	IN1	7	IN7
2	IN2	8	IN8
3	IN3	9	IN9
4	IN4	10	IN10
5	IN5	11	IN11
6	IN6	12	IN12

3 Selection type of operators

! IMPORTANT !

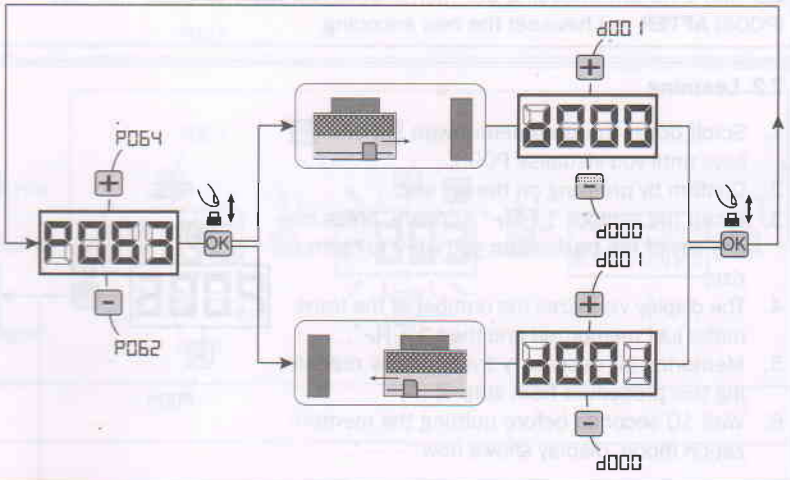
1. Scroll down the parameters with [+] and [-] keys until you visualise P028;
2. Access the parameter by pressing the [OK] key;
3. Verify that the value corresponds to d007 (GULLIVER), otherwise, you must select it by pressing [+] and [-] keys;
4. Confirm your choice by pressing the [OK] key (display returns again to P028).



4 Selection of direction of motion

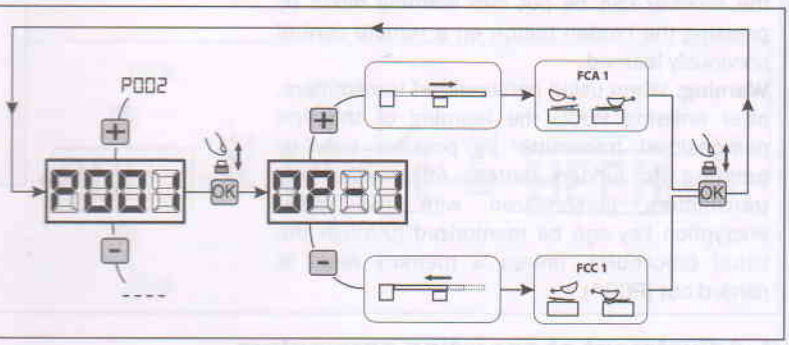
1. Scroll down the parameters with [+] and [-] keys until you visualise P063;
2. Access the parameter by pressing the [OK] key;
3. Acting on [+] and [-] keys, set:
   - d000=motor in standard position (on the left of the gap);
   - d001=motor in inverted position (on the right of the gap);
4. Confirm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

Warning: The parameter automatically reverses the motors output open/close.
Warning: Changing this parameter you need to change the parameters for the opening and closing limit switches.



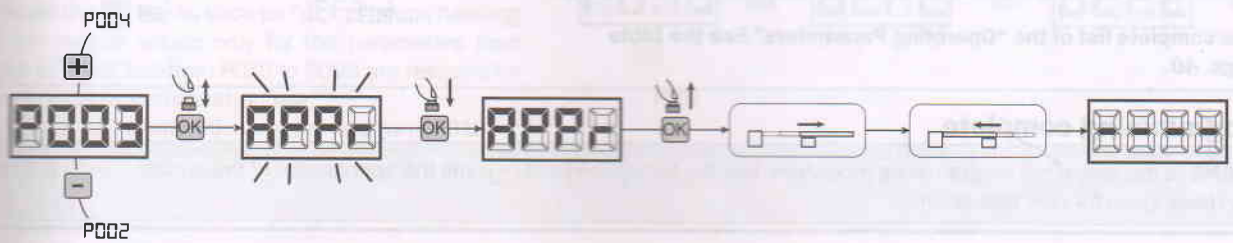
5 How to adjust the limit switche

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).



6 Motor stroke learning

1. Make sure you have properly adjusted the opening/closing limit switches cams;
2. Scroll down the parameters with [+] and [-] keys until you visualise P003;
3. Access the parameter by pressing the [OK] key;
4. When "APPr" flashes, continue pressing the [OK] key;
5. Release the [OK] key when "APPr" stops flashing; Start the learning procedure with operator 1 opening;
6. Wait for the door searches and stops on the opening stop and then on the closing stop.
7. Once the procedure is ended, the display will show "----".



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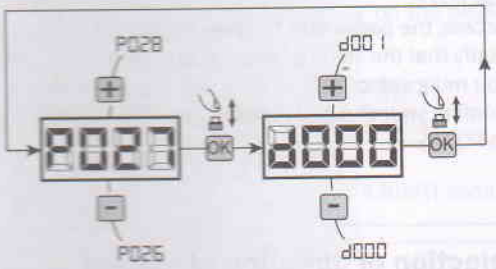
7 Transmitters learning

7.1 Transmitters coding selection

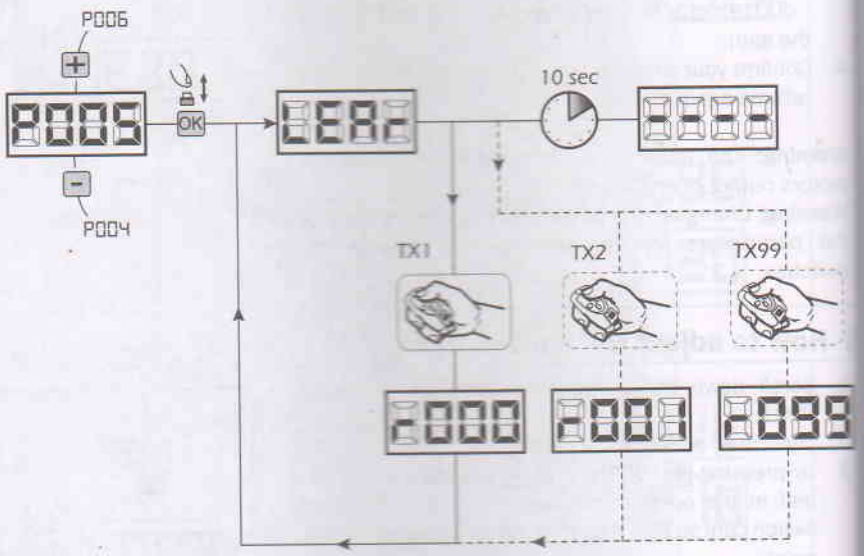
1. Scroll down the parameters with ⊞ and ⊟ keys until you visualise P027;
2. Confirm by pressing on the OK key;
3. Select the type of transmitter by scrolling ⊞ and ⊟ keys:
   - d000=fix rolling-code (**suggested**);
   - d001=complete rolling-code;
   - d002=dip-switch;
4. Confirm by pressing on the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

7.2 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 "----".

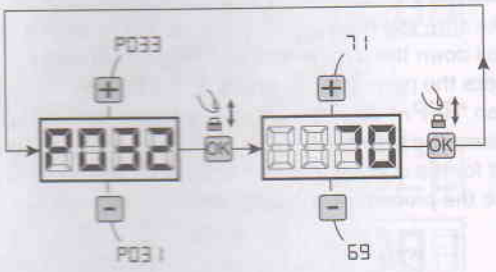


Warning: In the case of rolling code remotes, the receiver can be put into learning mode by pressing the hidden button on a remote control previously learned.
Warning: When using personalized transmitters, after entering P005 the learning of the first personalized transmitter is possible only by pressing its hidden button. Afterwards, only transmitters personalized with the same encryption key can be memorized (through the usual procedure), unless a memory reset is carried out (P004).

8 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. 40.

9 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 33.

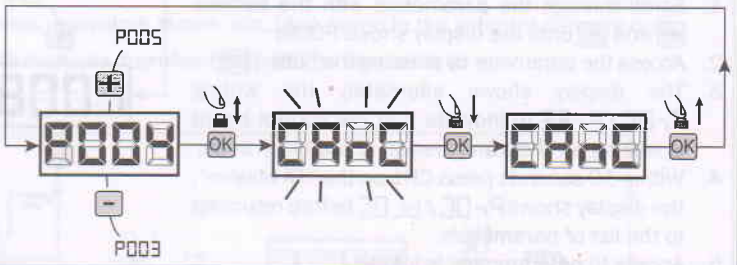
7 ADVANCED PROGRAMMING

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

1 Deletion of memorized transmitters

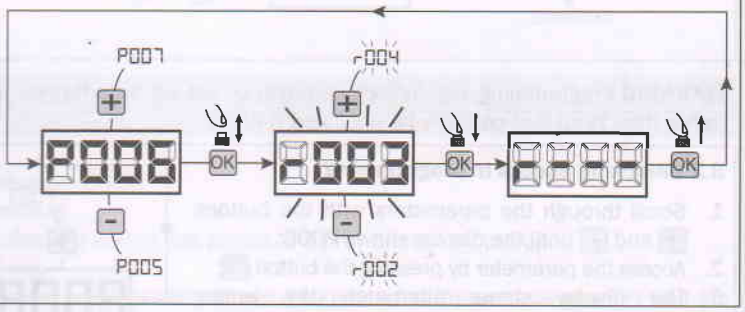
1.1 Deletion of all transmitters

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 key for a few seconds;
5. Release the OK key when appears "r---";
6. The selected transmitter is deleted (display shows again P006).

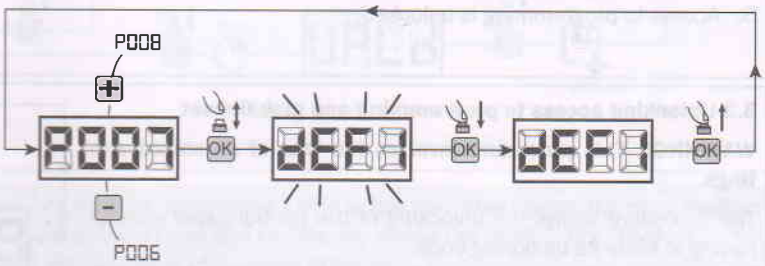


2 Resetting of default parameters

2.1 Restoring operating parameters

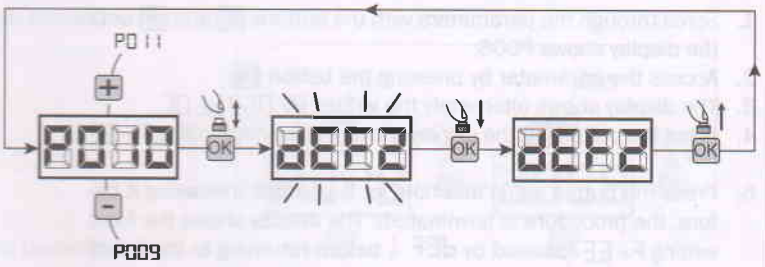
1. Scroll through the parameters with the buttons + and − until the display shows P007;
2. Confirm by pressing on the OK key;
3. When "dEF !" is flashing, press the OK key for a few seconds;
4. Release the OK key as soon as "dEF !" stops flashing; All the default values are restored except for the parameters 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).



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.



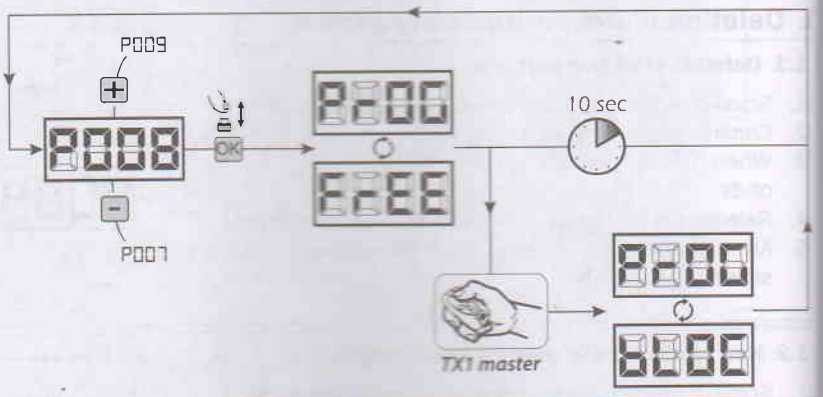
EN

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

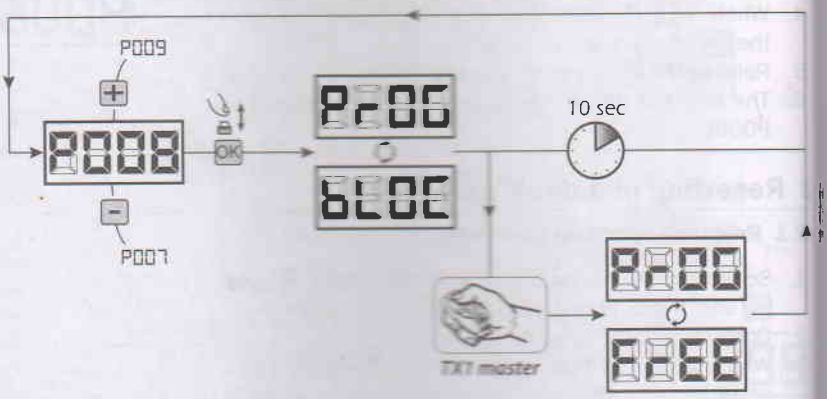
1. Scroll through the parameters with the buttons ⊞ and ⊟ until the display shows P008;
2. Access the parameter by pressing the button OK;
3. The display shows alternately the writing P-00/F-EE to indicate that the control board is waiting for the transmission of the block code;
4. Within 10 seconds press CH1 on the "TX Master", the display shows P-00/bL0C before returning to the list of parameters;
5. Access to programming is locked.



WARNING Programming lock/unlock can also be set via Smartphone using the DEA Installer APP. In this case, an installer code is set other than zero that can only be unlocked via APP.

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 P-00/bL0C 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 P-00/F-EE before returning to the list of parameters;
5. Access to programming is unlocked.

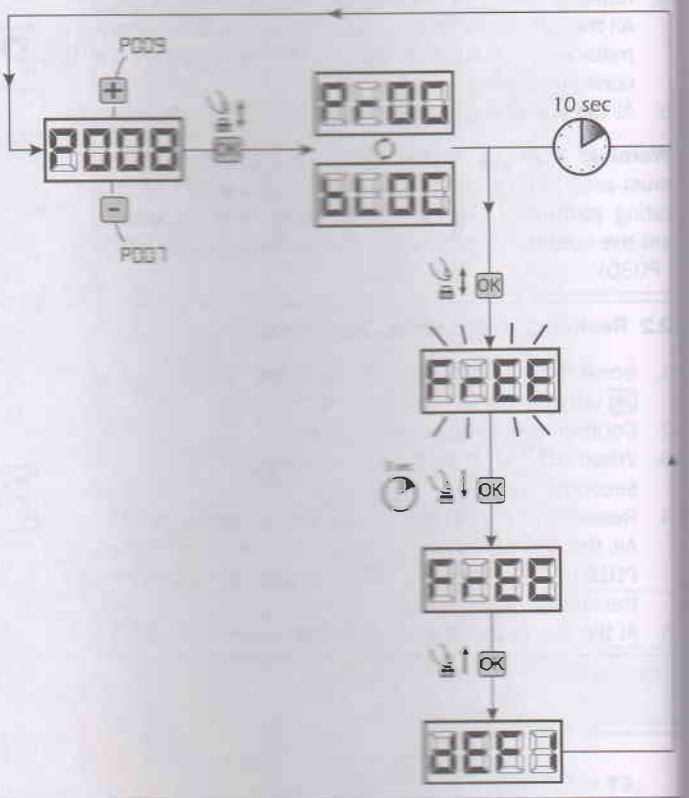


3.3 Unlocking access to programming and global reset

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 P-00/bL0C;
4. Press the button OK, the display shows the flashing writing F-EE ;
5. Press the button again and hold for 5 seconds (releasing it before, the procedure is terminated): The display shows the fixed writing F-EE followed by dEF !, before returning to the list of parameters;
6. Access to programming is unlocked.



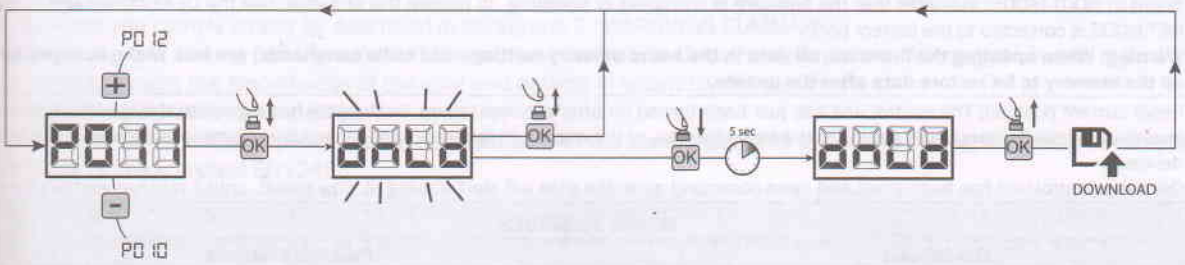
4 Downloading/uploading data memory

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;

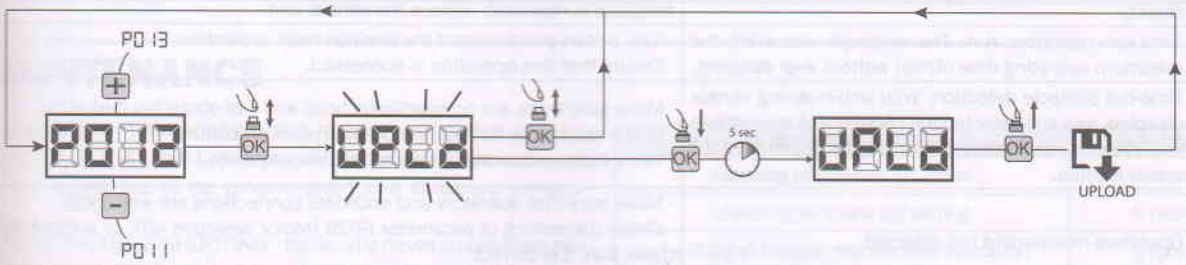
Warning: If there is any data in the external memory, during the memory download they will be overwritten.

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.

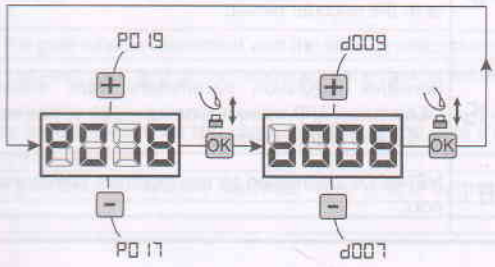


WARNING If you are not connected to any external storage units or if the connecting cable is disconnected during the data transfer operation, the display will visualize ErrS, then the control unit is entirely reset and the display shows the word "TYPE" flashing. Refer to the instruction of the external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

5 Inputs configuration

If 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 39);
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 ready again for new manoeuvres.

EN

8 MESSAGES SHOWN ON THE DISPLAY

WORKING STATUS MESSAGES	
Mess.	***Description***
----	Gate is closed
_ _	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 input intervened or an obstacle is detected with limited inversion duration (P055 > 0 or P056 > 0)
⌞ ⌞	Board in BOOT-MODE: Indicates that the firmware is corrupted or updating. To restore the firmware, use the DEAinstaller APP and make sure NET-NODE is corrected to the correct port. **Warning: When updating the firmware, all data in the board memory (settings and radio commands) are lost. Make sure you have backed up the memory to be restore data after the update.**
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 (7) 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.
bLOC URrt	Board programming attempted when a NET-NODE device is connected.	Turn off power, disconnect the NET-NODE from the communication port and turn back on;
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 fault/overheating in the control unit's power circuit.	Turn off power for several minutes and turn back on. Give a start command: if the message is repeated, replace the control unit.
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.
Err9	No/interrupted communication with remote memory board (also NET-EXP or NET-NODE).	- 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.
Er 10 Er 11	Possible fault/overheating in the control unit's power circuit.	Turn off power for several minutes and turn back on. Give a start command: if the message is repeated, replace the control unit.
Er 12	Possible malfunction in the control unit's power circuit or in the encoder circuit.	Check the wiring of the encoder and the motor. Shut the power supply off and on again. Give a start command: if the message is repeated, perform the following checks. - Enter P003 and move the door using the + and - buttons. - If the door moves at maximum speed and the display shows Err7, replace the motor's encoder card. - If the motor still remains stationary, replace the control unit.
Er 15	Sensitive regulation parameters were edited via DEAinstaller APP without running motor stroke learning at the end of the operation.	Run motor stroke learning (P003) first to be able to run any other operation.
Er81	NET-NODE connected to the incorrect communication port.	Connect NET-NODE to the correct port according to that indicated in the control unit diagram.

9 START-UP

The start-up phase is very important to ensure maximum security and compliance to regulations, including all the requirements of EN 12445 standard which establishes the test methods for testing the automation for gates.

DEA System reminds that all installation, maintenance, cleaning or repair operations on any part of the system must be performed exclusively by qualified personnel who must be responsible of all texts requie by the eventual risk;

9.1 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.

WARNING Using spare parts not indicated by **DEA** System and/or incorrect re-assembly can create a 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.

9.2 Unlocking and Manual operation

In the event of malfunctions or simple power failure, release the motor (Pic. 7) and perform the operation manually.

The knowledge of the unlocking operation is very important, because in times of emergency the lack of timeliness in acting on such device can be dangerous.

WARNING The efficancy and safety of manual operation of the automation is guaranteed by **DEA** System only if the installation has been installed correctly and with original accessories.

10 MAINTENANCE

Good preventive maintenance and regular inspection ensure long working life. In the table below you will find a listo f inspections/ maintenance operations to be programmed and executed periodically.

Consult the TROUBLE-SHOOTING" table whenever anomalies are observed in order to find the solution to the problem and contact **DEA** System directly whenever the solution required is not provided.

INTERVENTION TYPE	PERIODICITY
cleaning of external surfaces	6 months
checking of screw tightening	6 months
checking of release mechanism operation	6 months
electric brake cleaning	6 months

TROUBLE-SHOOTING	
Description	***Possible solutions***
When the opening or closing command is activated the gate leafs fail to move and the operator's electric motor fails to start.	The operator is not receiving correct power supply. Check all connections, fuses, and the power supply cable conditions and replace or repair if necessary. If the gate does not close check the correct functioning of photocells.
When the opening command is activated, the motor starts but the gate leafs fail to move.	Check that the unlocking system is closed (see Pic. 7).
	Check the electronic force adjustment device and the mechanical clutch.
	Make sure that the motor does not push in the opposite direction, the limit switch electrical connections might be reversed.
The gate moves by fits and starts, it is noisy, it stops at half run or it does not start.	Make sure that nothing hinders the gate wheels movement and the slide in which they roll.
	There always must be backlash between rack and pinion; make sure the rack is accurately positioned.
	The power of the gearmotor may be insufficient for the characteristics of the gate's wing; check the choice of model whenever requiredh.
	If the operator attachment to the gate bends or is badly fastened, repair and/or buttress it.

EN

PAR.	PROCEDURE	SETTABLE VALUES
P000	Positioning of operator 1	
P001	Positioning of operator 2	
P002	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	Restoring the "I/O" configurations (input/output)	
P011	Downloading data on the external memory unit	
P012	Uploading data from an external memory unit	
P013	Visualisation of inputs and operations-counter status	
P014	Unused parameter	
P015	Unused parameter	

PAR.	PARAMETER DESCRIPTION	SETTABLE VALUES		DEFAULT VALUES 230V
P016	INPUT_3 selectioning input type	• 000: IN3 type=free contact • 001: IN3 type=constant resistance 8K2		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 (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
P018	INPUT_2 operating selection		IN2	002
P019	INPUT_3 operating selection		IN3	010
P020	INPUT_4 operating selection		IN4	008
P021	INPUT_5 operating selection		IN5	012
P022	INPUT_6 operating selection		IN6	014

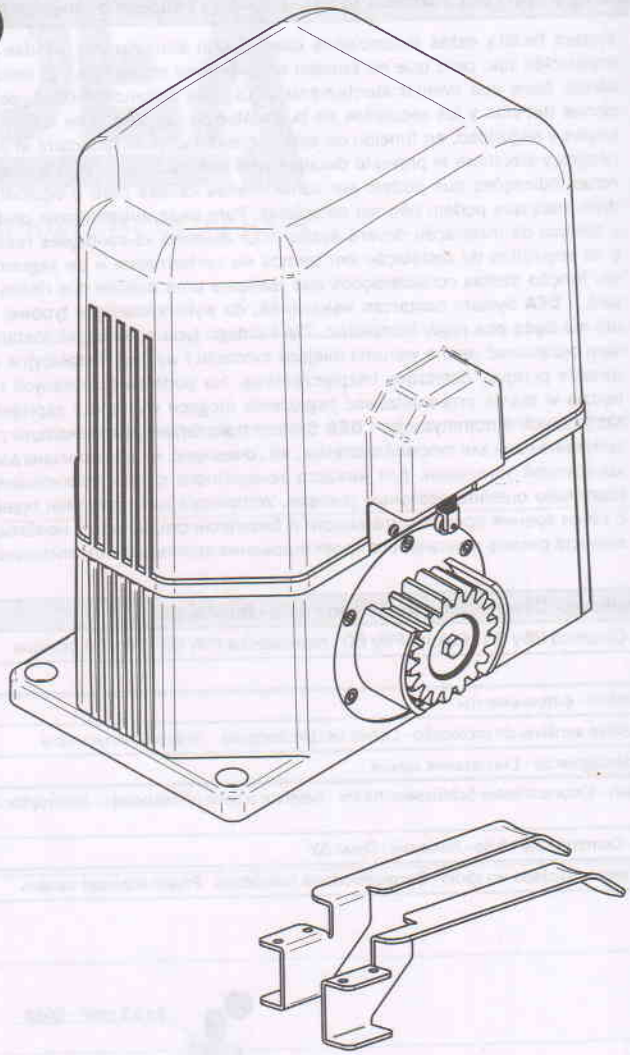
					230V
INPUTS CONFIGURATION PARAMETERS	P024	Allocation of CHANNEL 1 of remotes		• 000: NONE (unused) • 001: START (start) • 002: PEDESTRIAN (pedestrian) • 003: OPEN (separated open) • 004: CLOSED (separated close) • 005: NONE (unused) • 006: NONE (unused) • 007: ELOCK-IN (electric-lock activation. See P062) • 008: AUX_IN (with NET_EXP only)	CH1	001
	P024	Allocation of CHANNEL 2 of remotes			CH2	000
	P025	Allocation of CHANNEL 3 of remotes			CH3	000
	P026	Allocation of CHANNEL 4 of remotes			CH4	000
	P027	Selection of type of remotes		• 000: HCS fix-code • 001: HCS rolling-code • 002: Dip-switch		000
OPERATORS CONFIGURATION PARAMETERS	P028	Selection type of operators		• 005: LIVI 5/24 - 6NET • 006: LIVI 8/24 - 9NET • 007: GULLIVER - REV		005
	P029	Unused parameter				000
	P030	Unused parameter				001
OPERATING PARAMETERS	P031	Operators speed adjustment during slow-down while opening	**Warning:** For operators without encoder, speedness during the stroke while opening/ closing (100%) and slow down speedness while opening/ closing (30%) are fixed independently from set values.	15%tot.....100%tot		040
	P032	Operators speed adjustment during the stroke while opening		15%tot.....100%tot		100
	P033	Operators speed adjustment during the stroke while closing		15%tot.....100%tot		100
	P034	Operators speed adjustment during slow-down while closing		15%tot.....100%tot		040
	P035	Slow down duration adjustment while opening		0%tot.....80%tot		025
	P036	Slow down duration adjustment while closing		0%tot.....80%tot		025
	P037	Operator 1 force adjustment while opening (if = 100% obstacle detection deactivated)	**Warning:** For operators without encoder, while adjusting the force, obstacle detection during the slowdown is ignored.	15%tot.....100%tot		050
	P038	Operator n.1 force adjustment while closing (if = 100% obstacle detection deactivated)		15%tot.....100%tot		050
	P039	Unused parameter				/
	P040	Unused parameter				/
	P041	Automatic closing times adjustment (if = 0 automatic closing deactivated)		0sec.....255sec		000
	P042	Pedestrian automatic closing time adjustment (se = 0 pedestrian automatic closing deactivated)		0sec.....255sec		000
	P043	Pedestrian stroke duration adjustment		5%tot.....100%tot		030

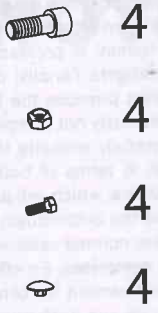
				230V
P044	Pre flashing time adjustment		0sec.....10sec	000
P045	Unused parameter			/
P046	Unused parameter			/
P047	Collectivity function: if it is activated it deactivates both opening and closing inputs for the whole duration of automatic opening and closing		• 000: disabled • 001: activated only upon opening • 002: activated on automatic opening and closing	000
P048	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.e. 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
P049	"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
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). 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 2 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
P051	PHOTO 2			000
P052	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> 0 "courtesy light" (output ON during each movement, OFF when the motor stops, after the setting delay)		• 000: "fix warning light" • >000 : courtesy light" off delay" (1sec.....255sec)	000
P053	Unused parameter			/
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 ingnored.		• 000: "soft start" deactivated • 001: "soft start" activated • 002: "long soft start" activated	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)	003
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)	003
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.....40x25ms)	000
P058	Unused parameter			/
P059	Unused parameter			/

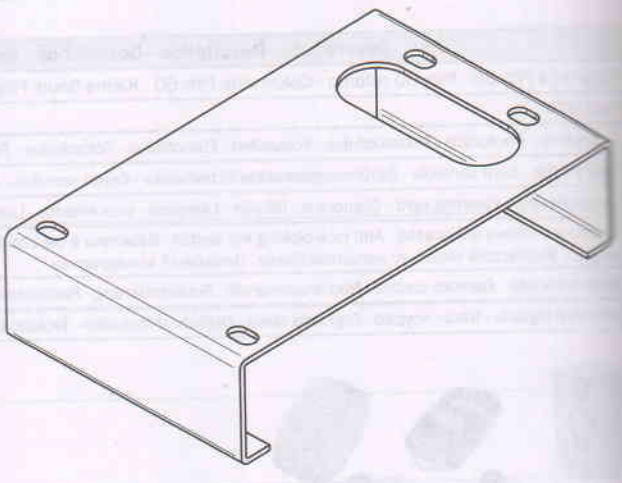
				230V
P060	Unused parameter			/
P061	Unused parameter			/
P062	Electric-lock output operating: If=0 "boost" output for electric-lock art.110 power supply, If=1 24V output controlled by the ELOCK_IN input as pulsed mode,If=2 24V output controlled by the ELOCK_IN input as step-by-step mode, If=3 electro-brake 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
P063	Run direction inversion: If=1 automatically reverses the outputs open/close of the operators, avoiding having to manual change the wiring when installing the operator in an inverted position. **Warning:** Changing this parameter you need to change the parameters for the opening and closing limit switches.		• 000: "Standard installation" • 001: "Inverted installation"	000
P064				/
P065	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
P066	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	001
P067	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
P068	SAFETY 2			000
P069	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
P070	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) • 005: "adjusts the acceleration durability at 1,5 sec (X*6 ms)	100
P071	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 (33-34 for 230V), 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

P072	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
P073	Unused parameter		/
P074	Unused parameter		/
P075	Unused parameter		/
P076	Unused parameter		/
P077 ... P099	**Configuration parameters dedicated to the expansion card NET_EXP (for a detailed description of the parameters, refer to the instruction manual).**		/

1







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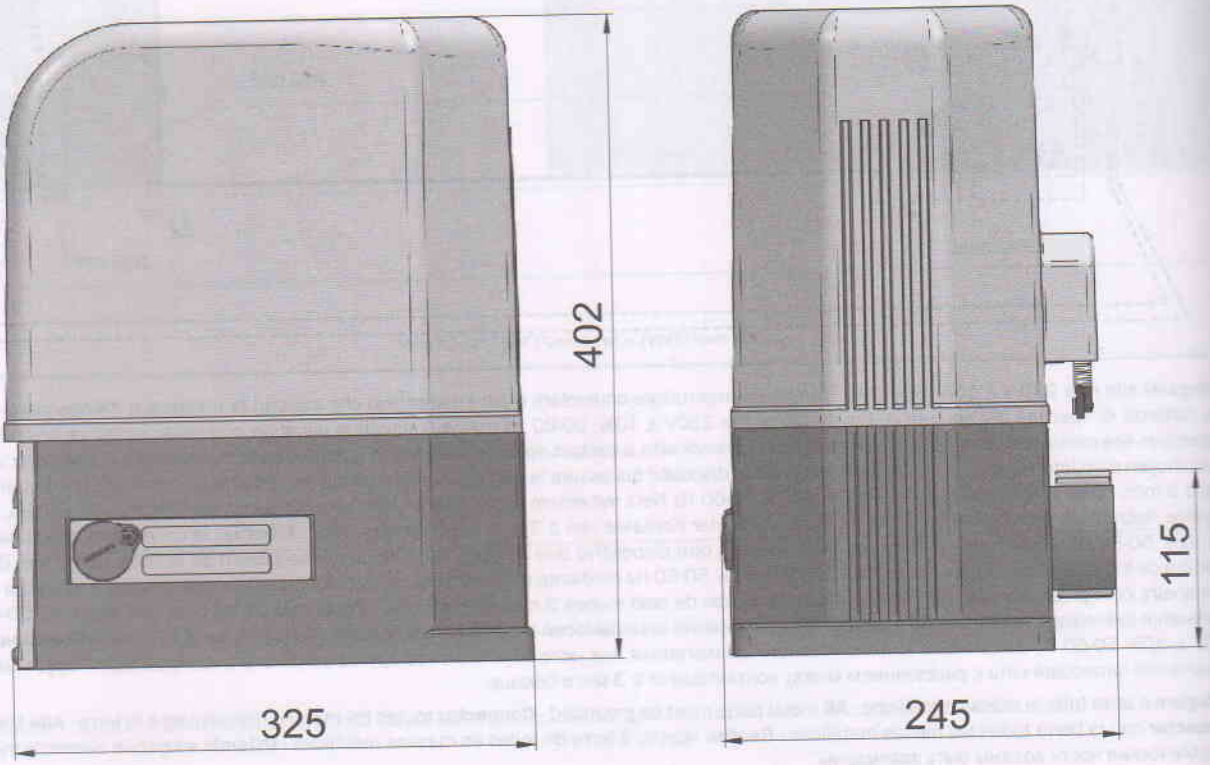

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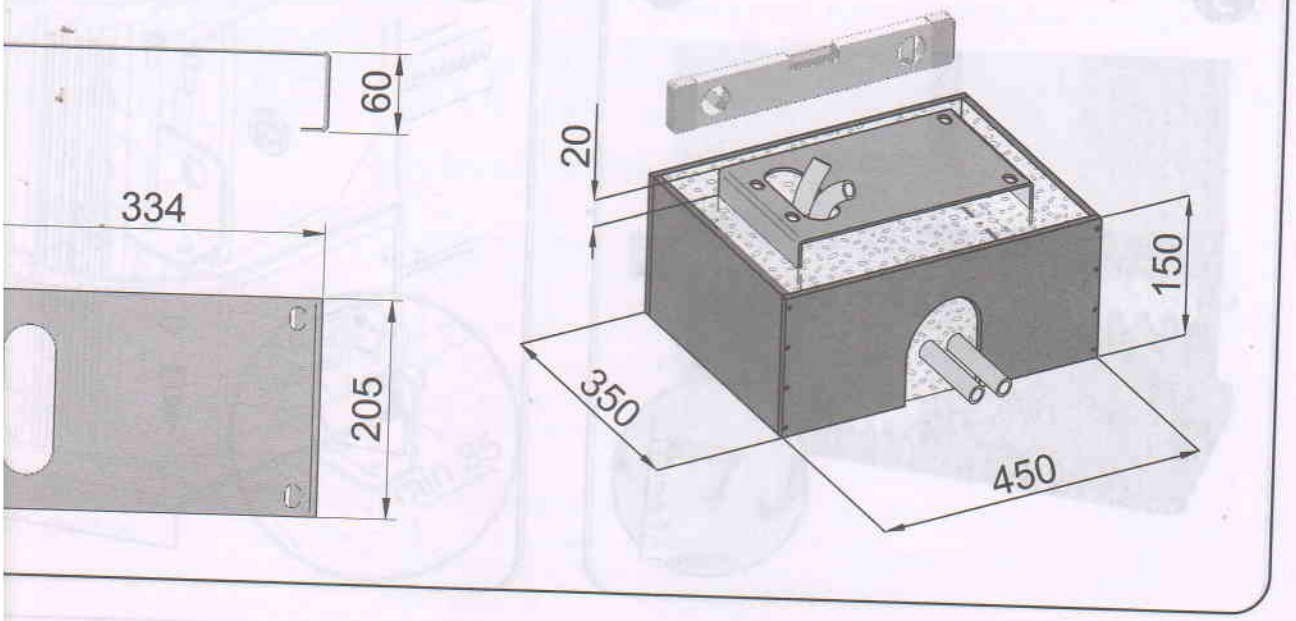
4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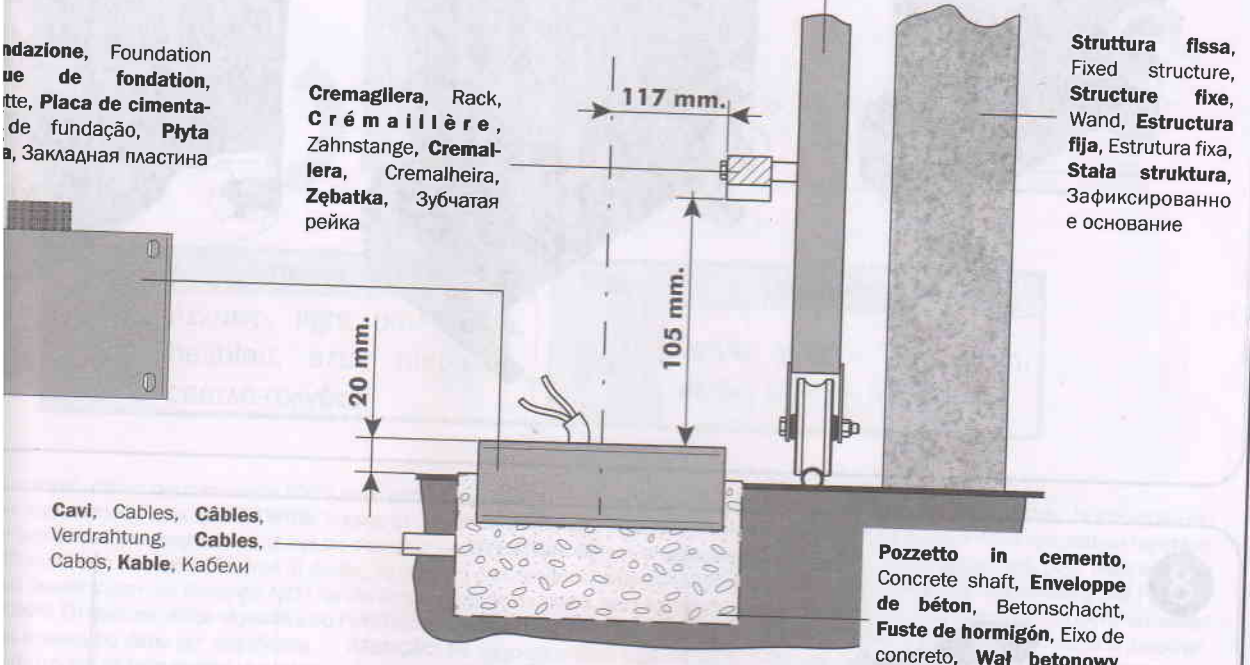
Anta cancello, Door gate, **Leaf**, Schiebetor, **Hoja**, Folha, **Brama**, Створка ворот
ndazione, Foundation **ue de fondation**, tte, **Placa de cimenta-** de fundação, **Płyta a**, Закладная пластина
Cremagliera, Rack, **Crémaillère**, Zahnstange, **Cremallera**, Cremalheira, **Zębatka**, Зубчатая рейка
117 mm.
105 mm.
20 mm.
Struttura fissa, Fixed structure, **Structure fixe**, Wand, **Estructura fija**, Estrutura fixa, **Stała struktura**, Зафиксированное основание
Cavi, Cables, **Câbles**, Verdrahtung, **Cables**, Cabos, **Kable**, Кабели
Pozzetto in cemento, Concrete shaft, **Enveloppe de béton**, Betonschacht, **Fuste de hormigón**, Eixo de concreto, **Wał betonowy**, Бетонный фундамент