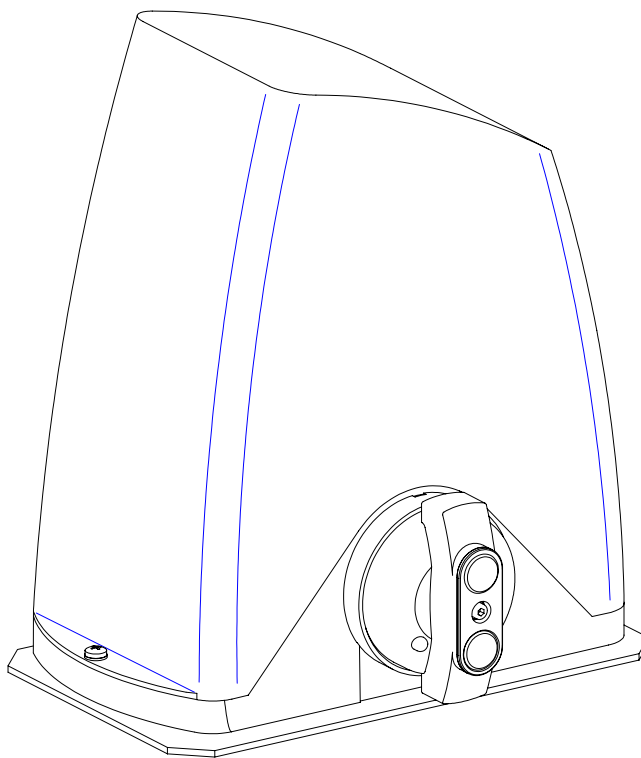




M-400

**OPERATORS FOR SLIDING GATES
WITH SLOW DOWN**



INSTRUCTIONS MANUAL

TECHNICAL SPECIFICATIONS

Power supply: 230 V-50 Hz.

Energy consumed: 340 w

Current: 1.6 A

Output speed: 50 r.p.m

Safety: Encoder+Regulator

Maximum weight on gate:

400 kg.

Locking

YES

Condenser:

8 μ F

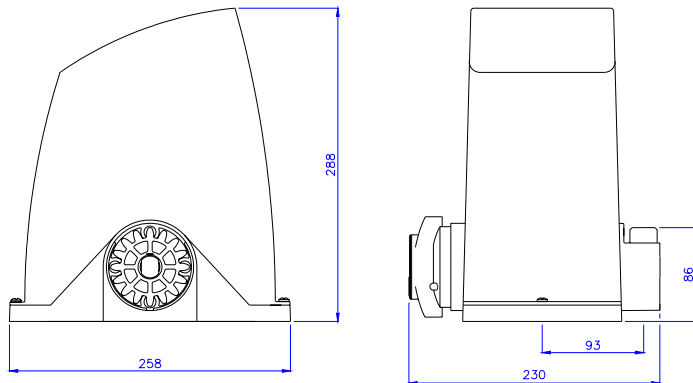
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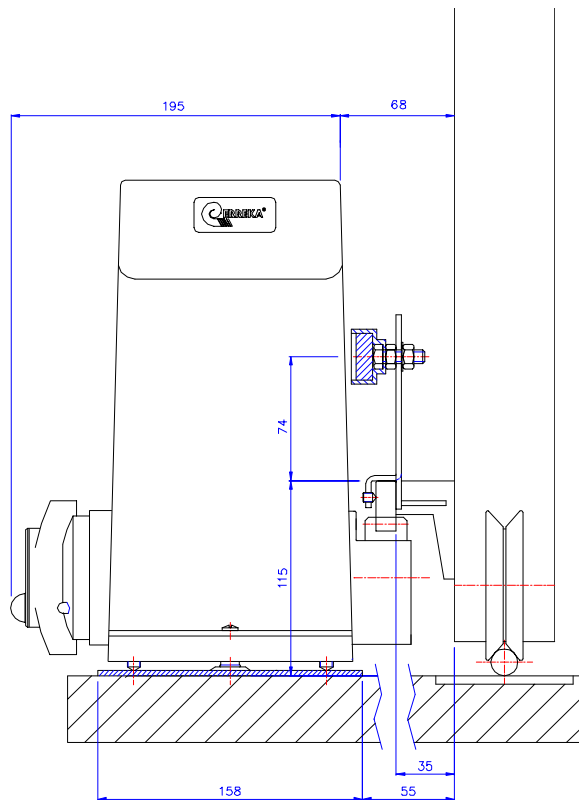
.Protection level:

IP44

GENERAL DIMENSIONS



INSTALLATION DIMENSIONS



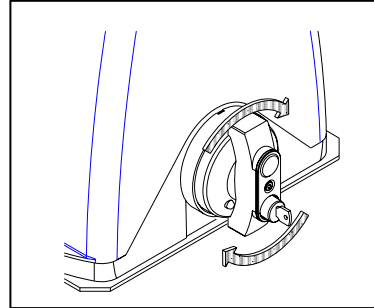
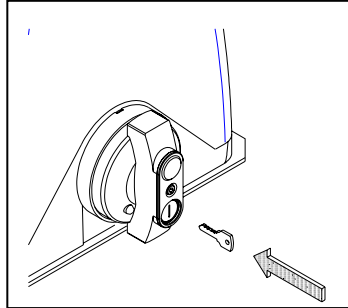
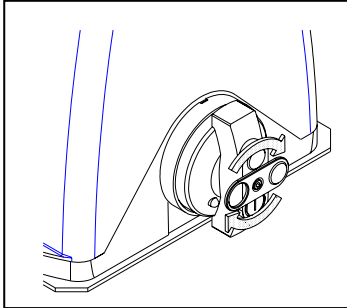
MANUAL OPERATION

Manual unlocking:

Turn the top cover 180° to free the cylinder lock.

Insert the key and open the piston lock.

Turn the handle clockwise approximately 8 turns. **Do not force the handle when it stops.**

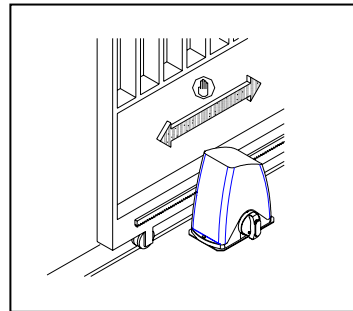
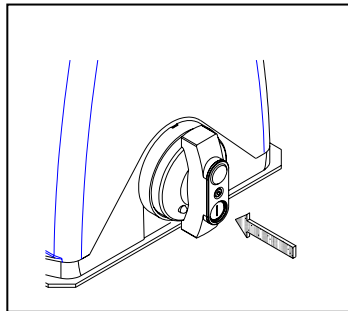
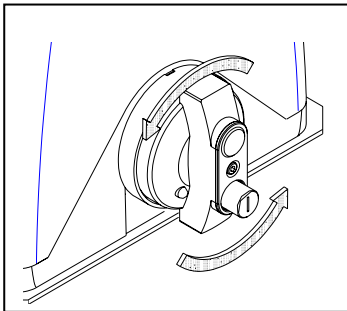


Locking the gate:

Turn the lock anticlockwise approximately 8 turns. **Do not force the handle when it stops.**

Insert the cylinder lock and turn the top cover.

Move the gate manually until the motor locks in.

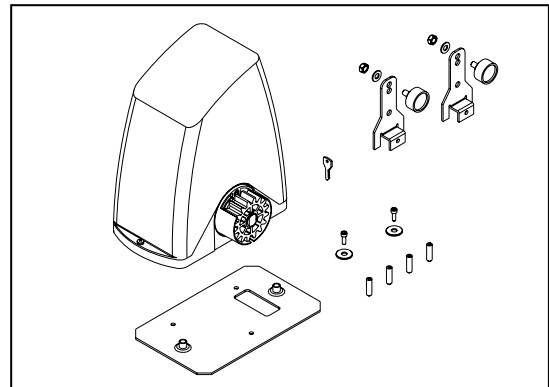
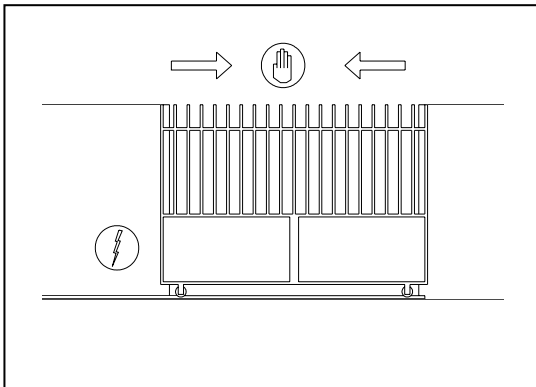


INSTALLING THE OPERATOR

0. Preliminary conditions:

Check the gate and automation conditions are in a perfect state of repair.

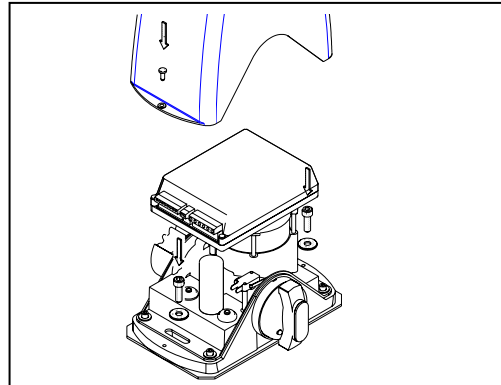
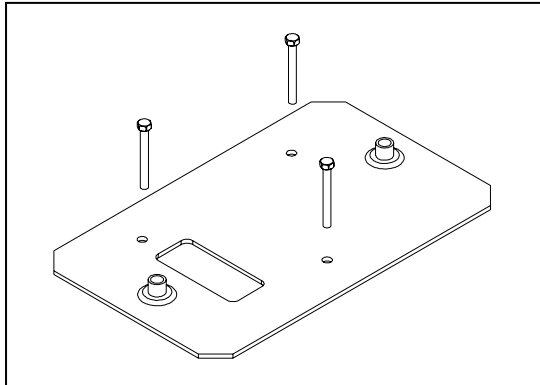
Check the integrity of the supplied mechanism.



1. Fastening the motor in position:

Fix the plate to the ground, taking into account the general dimensions of the motor.

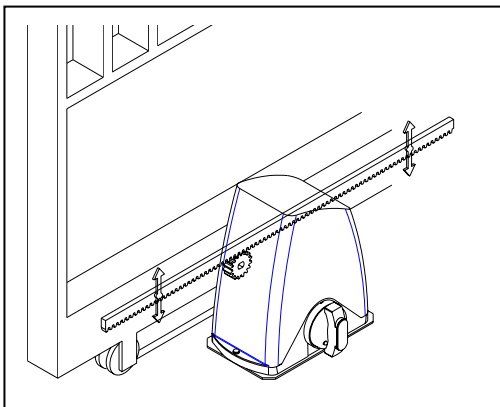
Fasten the motor to the plate.



2. Fastening the rack in position:

Fasten the rack to the gate, taking into account the dimensions of the motor on the ground.

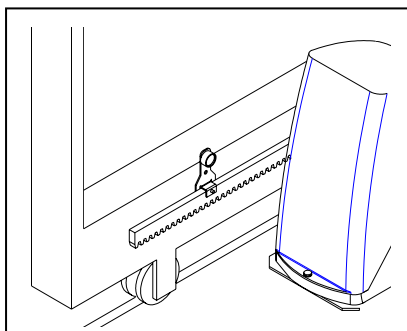
If necessary, compensate the height of the motor with height-adjustment screws.



. Fit the mechanism to the base by tightly screwing the Allen lock-screws.

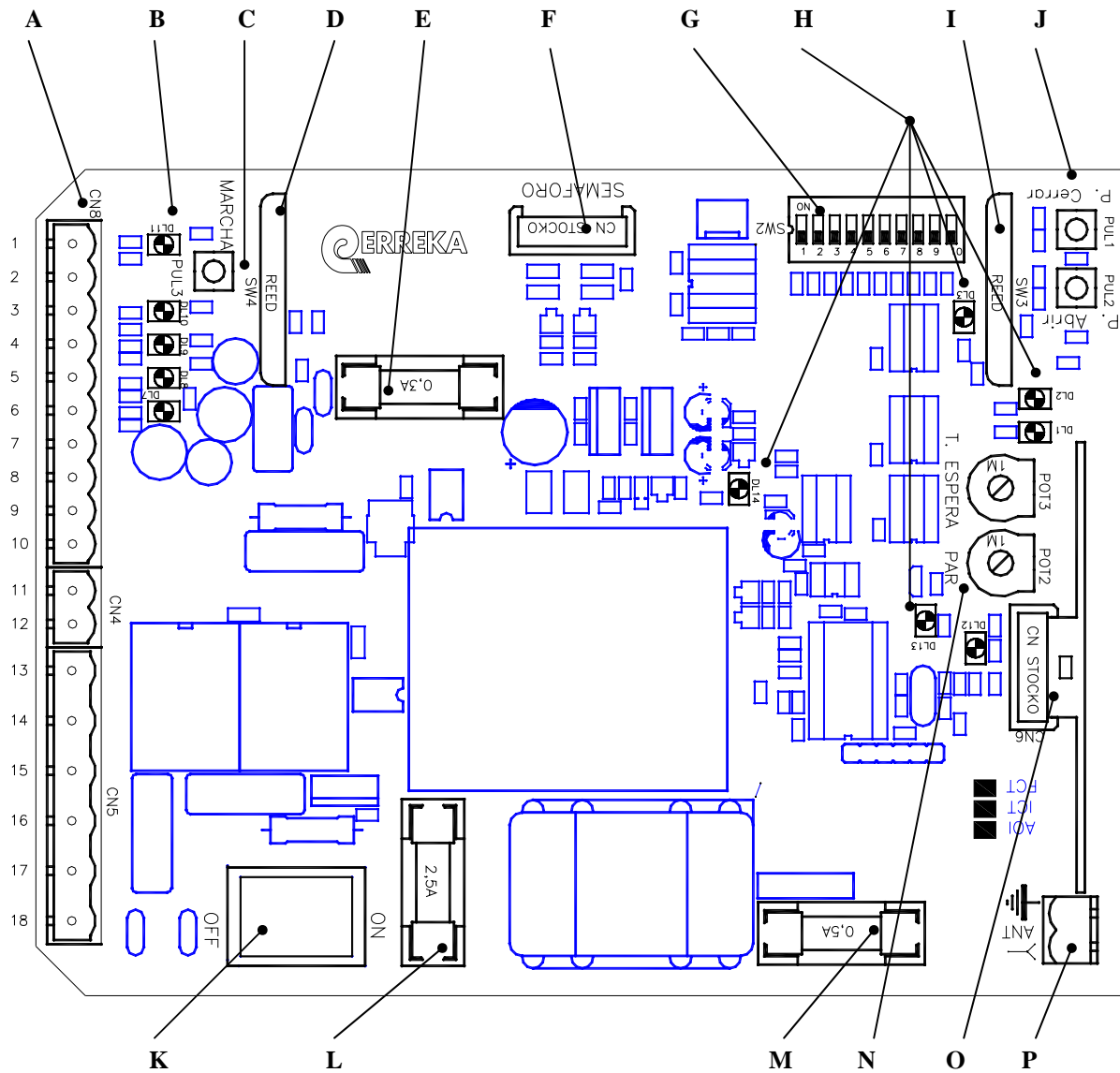
. Check the adjustment between the two by placing the mechanism in manual position and moving the gate along the rack. Leave a small clearance space so that the motor does not bear the weight of the gate. Once you have checked the adjustment, fasten the rack in its final position.

Fit the end stops in approximate positions on the rack. The magnet goes in the middle hole. It is recommended that you fit stops to the gate in open and closed positions to prevent the gate from sliding beyond the area of influence of the end stops.



Lock the motor.

DESCRIPTION OF THE CIRCUIT BOARD



A. Connections (1-18)

1. Full opening switch
2. Common
3. Pedestrian opening switch
4. Photocell
5. Open end stop
6. Close end stop
7. 24Vac/7 va
8. 24Vac/7 va
9. Safety connection
10. Safety connection
11. Flashing light
12. Flashing light
13. Turn 2
14. Turn 1
15. Common
16. 220 v
17. 220 v
18. Earth connection

B. LEDs (11, 10, 9, 8 and 7)

- LED DL11: Start motor 1. Total opening
- LED DL10: Start motor 2. Pedestrian opening
- LED DL9: Photocell
- LED DL8: Open end stop
- LED DL7: Close end stop
- LED DL5: Closing relay
- LED DL4: Openig relay

C. Start pushbutton

- D. Open/Close reed valve
- E. 0.3 A fuse
- F. Traffic light card connector
- G. 10-dip selector
- H. LEDs (1, 2, 3, 12, 13 and 14).
 - LED DL1: Delay;
 - LED DL2: Radius recording
 - LED DL3: Sweep recording
 - LED DL 12: Radio signal
 - LED DL13: Encoder operation
 - LED DL 14: Power ON-OFF

I. Open/Close reed valve

J. Open/Close pushbuttons

K. General ON-OFF switch

L. 2.5 A fuse

M. 0.5 A fuse

N. Timers

POT 3: Delay

POT 2: Par adjustment

O. Radio connector

P. Earth and aerial connector

START-UP

Before connecting the circuit board to the mains, connect the various peripherals to the circuit board.

Important: Remember to connect the earth cable.

1. Connect the circuit board to the mains (general ON-OFF switch).

2. Align the turn directions of the motor with the end stops.

- Activate the DIP 9 of the selector (G) in accord with the position of the motor on the gate.

Use the pushbuttons (J) Pul 1-Close and Pul 2-Open to check that the turn directions of the motor are correct. If they do not coincide, swap over the terminal cables 13 and 14.

- Check the limit switches are working correctly by passing a magnet in front of the valves (D and I) and checking that LEDs 7 or 8 switch off correctly in each case as shown in figures 1 and 2. Then adjust the limit switches (support and magnets) to their final position on the rack.

Fig. 1.- DIP 9 in ON

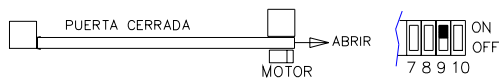
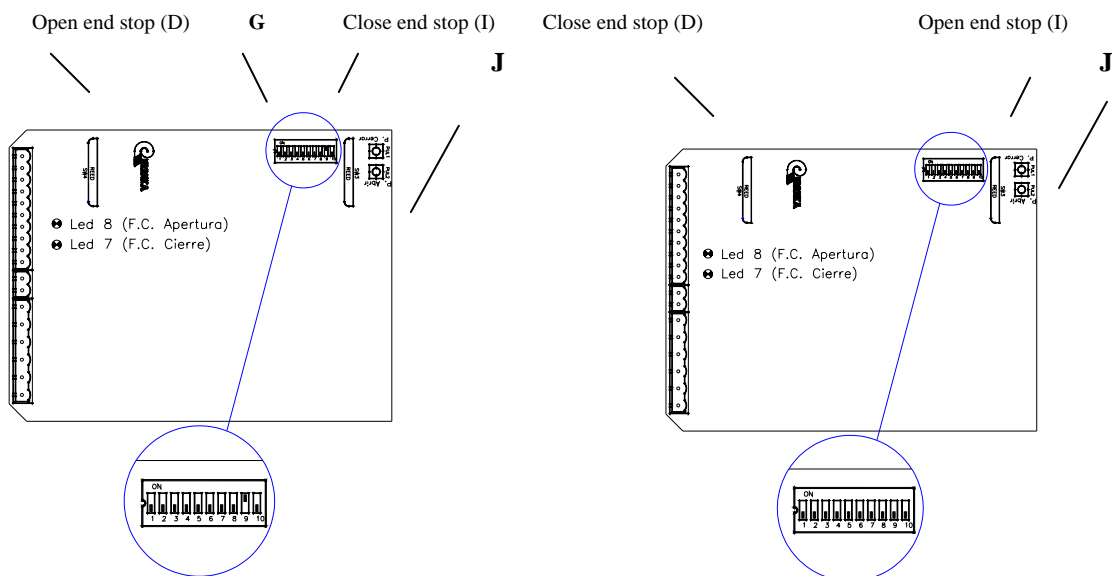
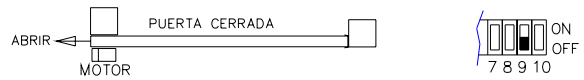


Fig. 2.- DIP 9 in OFF



3. Adjust the power of the motor

Set the par N potentiometer to minimum (turn it anticlockwise). Turn it gradually clockwise until the motor has enough power to move the gate along the entire sweep.

4. Selector (G) options

- | | | |
|-------|----|--|
| DIP 1 | ON | Enables programming. |
| DIP 2 | ON | Memorises the sweep of all the gate. |
| DIP 1 | ON | Enables programming. |
| DIP 3 | ON | Memorises the sweep of the pedestrian opening. |
| DIP 1 | ON | Enables programming. |

| | | |
|-------|--------|---|
| DIP 4 | ON | Memorises the radio code. |
| DIP 2 | ON | Activates the three-second flashing light warning. |
| DIP 3 | ON | Step-by-step function |
| DIP 3 | OFF | Community function |
| DIP 4 | ON | Automatic cycle. |
| DIP 4 | OFF | Semi-automatic cycle. |
| DIP 5 | ON | Photocell active during opening. |
| DIP 5 | OFF | Photocell cancelled during opening. |
| DIP 6 | ON | Flashing light output. |
| DIP 6 | OFF | Flashing light on (not flashing) output. |
| DIP 7 | ON | Encoder enabled. |
| DIP 7 | OFF | Encoder disabled. Eliminating the encoder is the same as eliminating the internal safety of the motor. |
| DIP 8 | ON | Slow down activated. |
| DIP 8 | OFF | Slow down deactivated. |
| DIP9 | ON/OFF | Change the position of the ends of sweep (open instead of close and vice versa) |
| DIP10 | ON | Set always this DIP in ON |

5. Programming the mechanism:

5.- Automatism programming:

5.1.- Recording door travel.

- Move the door to closed position, either manually or using the control panel buttons.
- Turn DIP 7 and DIP 8 to ON (Gentle stop and encoder options activated).

-Turn DIP 1 of selector G to ON. (Check LED DL3 comes on).

-Turn DIP 2 of selector G to ON.

-Press Start (Button C). The door will begin to open.

-Press Start (Button C) when the door is moving, at the point where you want the door to start slowing down (around 15 cm approx.). The door will then be stopped by the limit switch (door open).

-Press Start (Button C) for the door to start closing.

-Press Start (Button C) when the door is moving, at the point where you want the door to start slowing down (around 15 cm approx.). The door will then be stopped by the limit switch (door closed).

-Turn DIP 1 to OFF.

-Turn DIP 2 to OFF.

Making this recording guarantees that the motor will open the door for the first 2 seconds at incremental speed before it reaches its maximum speed. The door will then advance at this speed to the point indicated during the recording process, at which point it will begin to gradually slow down until it is stopped by the limit switch.

If the door stops and starts suddenly during the manoeuvre, you should reduce the slowing down distance.

5.2. Recording of partial opening (pedestrian)

Turn DIP 1 on the selector G to ON.

Turn DIP 3 on the selector G to ON.

Press "Peatonal". The gate starts to open.

Press "Peatonal" when the gate is in movement and at the position where we want it to start slowing down.

Press "Peatonal" to close the door in needed position of pedestrian opening.

Press "Peatonal" for the gate to begin to close.

Press "Peatonal" when the gate is in movement and at the position where we want it to start slowing down. The gate then stops at the end of sweep.

Turn DIP 1 on the selector to OFF.

Turn DIP 3 on the selector to OFF.

Recording in this way guarantees that the motor will open at increasing speed for the first two seconds until it reaches maximum speed. The gate then moves at said speed until it reaches the point indicated during the recording process, from where it gradually slows down until it stops at the end point indicated.

N.B. For all types of operation:

If during the opening manoeuvre, the gate comes up against an obstacle, it stops and remains in said position until the button is pressed once again.

If, during the closing manoeuvre, the gate comes up against an obstacle, it stops and returns back to the open position.

Whenever the button is pressed while the gate is closing, it stops and returns to open position.

6. Selecting the operating mode

6.1 Automatic/semi-automatic cycle:

Automatic cycle (G selector DIP 4 ON).

ON – Open – Delay – Delay on gate open (time adjustable with timer N) – Close.

If ON is pressed during the delay or the photocell is activated during the the delay, it restarts.

Semi-automatic cycle (G selector DIP 4 OFF).

“Start” – Open – “Start” – Close.

6.2 Community function/Step by step:

Community function (DIP 3 ON for motor).

One START opens and further START commands are not accepted during opening.

Step-by-step function (DIP 3 ON for motor).

One START opens; another START stops the gate; a third START closes; and a fourth START if it is given during the closing, stops the gate again and switches until open gate position.

7. Programming the radio (433 MHz trinary code only)

Turn DIP 1 on the selector G to ON.

Turn DIP 4 on the selector G to ON. This opens the memory.

Select code on the control and press the channel on which to record. The DL2 LED starts to flash.

Turn DIP 4 to OFF.

Turn DIP 1 to OFF.

Once the code is recorded, it is compulsory to turning on and turning off the control panel.

8. Selecting the type of operation of the flashing light.

7.1. Warning function

When DIP 2 of the selector (G) is turned to ON, the flashing light comes on for 3 seconds before the manoeuvre begins.

7.2. Light output

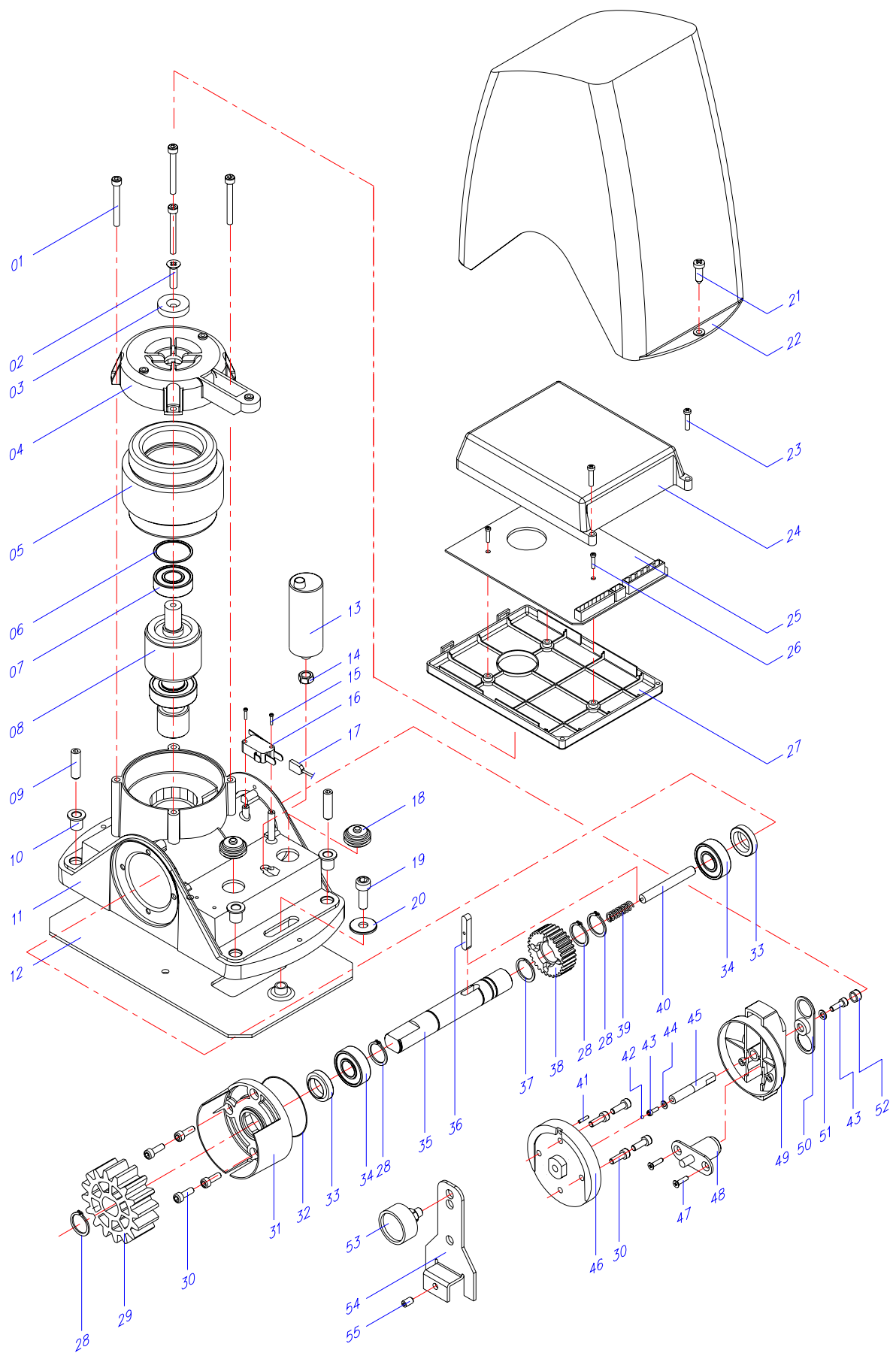
- Selector DIP 6 to ON. The light output flashes, which means that a normal bulb can be fitted for the flashing function.
- Selector DIP 6 to OFF. The output is permanent, which means a flashing bulb is required.

8. Selecting the type of operation of the photocell.

8.1. Photocell active during opening.

- With DIP 5 ON, the photocell field must not be crossed while the door is opening.
 - With DIP 5 OFF, the photocell field must not be crossed while the door is opening

SPARE PARTS CATALOGUE



| No. | Reference | Description |
|-----|--------------|------------------------|
| 1 | 27A055 | 5x50 screw |
| 2 | 27A021 | 5x12 screw |
| 3 | 27A049 | Encoder magnet |
| 4 | 27A002 | Stator cover |
| 5 | 27A037 | Stator |
| 6 | 02A064 | Spring washer |
| 7 | 27A002 | Stator cover |
| 8 | 27B001 | Rotor spindle |
| 9 | 27A031 | 8x25 threaded rod |
| 10 | 12A049 | Threaded rivet |
| 11 | 27A001 | Base |
| 12 | 27A016 | Base plate |
| 13 | 66-L 508-009 | 8 mF condenser |
| 14 | 26A071 | 8 nut |
| 15 | 26A122 | 2.9x13 screw |
| 16 | 27A045 | Microswitch |
| 17 | 27B004 | Safety cable for micro |
| 18 | 27A054 | Cable adapter |
| 19 | 19A023 | 8x25 screw |
| 20 | 05A046 | 8 washer |
| 21 | 26A043 | 4.8x13 screw |
| 22 | 27A010 | Outer cover |
| 23 | 27A050 | 3.9x19 screw |
| 24 | 27A009 | Circuit cover |
| 25 | 13B070 | Control panel |
| 26 | 27A020 | 3.5x16 screw |
| 27 | 27A008 | Panel base |
| 28 | 26A065 | A20 ring |
| 29 | 27A013 | Output gearing |
| 30 | 27A023 | 5x12 screw |
| 31 | 27A003 | Output spindle cover |
| 32 | 27A056 | O-ring |
| 33 | 02A164 | Scraper |
| 34 | 26A020 | Bearing |
| 35 | 27A014 | Motor spindle |
| 36 | 27A026 | Cotter |
| 37 | 27A046 | Elastic ring |
| 38 | 27A007 | Helical gearing |
| 39 | 27A019 | Spring |
| 40 | 27A017 | Unlocking pin |
| 41 | 27A044 | Pin |
| 42 | 27A053 | Ball |
| 43 | 27A042 | 4x8 screw |
| 44 | 27A052 | 4 washer |
| 45 | 27A018 | Unlocking screw |
| 46 | 27A004 | Unlocking base |
| 47 | 27A041 | 4x8 screw |
| 48 | 27A030 | Unlocking lock |
| 49 | 27A005 | Unlocking handle |
| 50 | 27A006 | Swivel cover |
| 51 | 27A048 | A4 washer |
| 52 | 16A056 | Cover |
| 53 | 26B021 | Magnet unit |
| 54 | 27A040 | Magnet-holder plate |
| 55 | 05A042 | Stud |

TROUBLESHOOTING

1. The motor does not work:

- 1.1. Check that the installation is correctly connected (Fig. 2)
- 1.2. Check that voltage is reaching the motor. (230V AC)

2. The motor works in one direction only:

- 2.1 Check if the motor common is correctly connected (Fig. 2)
- 2.2 Check that the condenser is connected.

3. The motor has no power:

- 3.1. Unlock the motor and check if the gate has any excessive resistance in its sweep. If so, remove the motor and clear the resistance until the gate moves easily and freely when pushed.
- 3.2. Check that the condenser is connected and that it has the correct capacity (see label on motor).
- 3.3. Check if the motor is locked. If not, lock it.

4. The gate does not reach the end of sweep:

Check if the opening and closing times are in accord with the length of the gate.

If the fault persists after you have made all the checks and adjustments, go to your nearest distributor or ERREKA technical service with as many details as possible about the fault.

INSTALLING THE MECHANISM

The M-400 model is compliant with the European reference directive:

Machinery Directive 89/392/CEE.

Low Voltage Standard 73/233/CEE

Electromagnetic Compatibility 89/336/CEE

It is recommended that the mechanism be installed by professionally qualified personnel in compliance with the legal standard corresponding to each place of installation.

CERTIFICATE OF WARRANTY

Automatismos Erreka guarantees this apparatus for a period of 24 months from the supply date.

Said warranty is applicable to any fault in manufacture.

The installer is responsible for taking the appliance to authorised technical service centres.

This warranty does not include:

Damage caused by incorrect installation or use of the apparatus.

Damage resulting from handling by non-authorised personnel.

Damage caused by external or atmospheric agents (lightning, floods, etc.).

