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SL - (544)

Electromechanical gearmotor INSTRUCTIONS FOR INSTALLATION











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INTRODUCTION

The new 24V gearmotor SL 544 allows easily and quickly automating small to medium-sized sliding gates of up to 500Kg.

The automated device with integrated control unit facilitates system certification in accordance with EN125453.

WARNINGS FOR THE INSTALLER

- Before proceeding with installation, fit a magnetothermal and differential switch with a maximum capacity of 10A
 upstream of the system. The switch must guarantee omnipolar separation of the contacts with an opening
 distance of at least 3mm.
- All the packaging materials must be kept out of reach of children since they are potential sources of danger.
- The manufacturer declines all responsibility for proper functioning of the automated device if failing to use original GIBIDI components and accessories suitable for the intended application.
- When installation has been completed, always carefully check proper functioning of the system and the devices used.
- This instruction manual addresses persons qualified for installation of "live equipment", therefore, good technical knowledge is required exercised as profession in compliance with the regulations in force.
- Maintenance must be performed by qualified personnel.
- Before carrying out any cleaning or maintenance operation, disconnect the control unit from the mains.
- This product has been designed and constructed solely for the use indicated in this document. Any other use may cause damage to the product and be a source of danger.
- · Verify the intended end use and take the necessary safety precautions.
- Use of the products for purposes different from the intended use has not been tested by the manufacturer and the operations performed are therefore on full responsibility of the installer.
- · Mark the automated device with visible warning plates.
- Warn the user that children and animals must not play or stand near the gate.
- Adequately protect the danger points, for example, using a sensitive frame.
- Check proper installation of the earthing system; connect all the metal parts of doors, gates, etc. and all the system components equipped with earthing plate.
- · Exclusively use original spare parts for any maintenance or repair.
- · Do not make any modification to the components of the automated device unless expressly authorised by GIBIDI.

Use adequate cable clamps to ensure proper mechanical connection of the wiring and such that the IP55 degree of protection of the box is maintained.



WARNINGS FOR THE USER

In the event of a fault or malfunctioning, disconnect the power supply upstream of the control unit and call technical service.

Periodically check functioning of the safety devices. Any repairs must be carried out by specialised persons using original and certified materials.

The product may not be used by children or persons with reduced physical, sensorial or mental abilities, or persons without experience and knowledge of the product unless correctly instructed.

Do not access the board for adjustments and/or maintenance.



WARNING: IMPORTANT SAFETY INSTRUCTIONS.

It is important for the safety of persons to follow these instructions. Keep this instruction manual.

ELECTRICAL EQUIPMENT

- 1- Gearmotor; 220-230V power supply, 3x1.5mm² cable (comply with the current standards)
- 2- Photocell transmitter 2x0.5mm² cable
- 3- Photocell receiver 4x0.5 mm² cable
- 4- Antenna screened coaxial cable.
- 5- Frame 4x0.5mm² cable
- 6- Rack
- 7- Key selector 3x0.5mm² cable
- 8- 24 VDC flashing light signaller 2x0.75mm² cable (if 12x0.75 mm² RX cable is present)
- 9- Omnipolar magnetothermal switch with minimum contact opening of 3 mm Power supply line to the control unit 220-230V, 50-60Hz, 3x1.5 mm² cable (comply with the current standards).

TECHNICAL DATA

Operator	SL 544
Туре	Irreversible electromechanical gearmotor
Supply voltage	220/230Vac 50-60Hz
Motor power supply	24Vdc
Power absorbed	MAX 100W
Current absorbed	MAX 4A
Thermal cutout	-
Pick-up capacitor	-
Max speed	0,2 m/sec
Maximum torque	12 N/m
Operating temperature	-20°C + 60°C
Degree of protection	IP 55
Operating frequency (%)	90% (a 20°C)
Maximum leaf length	6 m
Encoder	Integrated into the motor

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PRELIMINARY WARNINGS

Check that the gate structure is in conformity with the regulations in force and that leaf movement is linear without friction.

Preliminary checks:

- Check that the gate structure is sufficiently robust. In any case, check that the weight and dimensions of the
 gate fall within the limits of use of the operator;
- Check that the leaf can be moved manually without force (points of greatest friction) for the entire travel of the gate during both opening and closing;
- Check that the area where the gearmotor will be fitted is not exposed to flooding. If so, install the gearmotor in a
 position raised from the ground;
- If the gate is not a new installation, check the state of wear of all the components, repair or replace the defective or worn parts and perform any other operations necessary.

The reliability and safety of the automated device is directly dependent on the condition of the gate structure.

EMBEDDING THE PLATE

- 1- Make the hole for the foundation plate respecting the dimensions (2) and arrange the plate according to the closing direction of the gate (3 4). The hole depth must be at least equal to the length of the cramp-irons (5).
- 2- Fit the flexible hoses through which the electric cables will run so that they lead out of the plate (3-4) and protrude from the hole by about 30-40 mm (5).
- 3- Make sure that the plate is level (5) and start filling the hole with concrete.
- 4- Wait for the concrete to dry.
- 5- Run the electric cables (for connection of the accessories and electrical power supply) through the flexible hoses.

To make it easier to make the electrical connections to the control unit, it is advisable to keep a cable length of 400 mm from the foundation plate hole (5).

INSTALLING THE GEARMOTOR

- 1- Remove the gearmotor casing by undoing the screws under the side caps (6).
- 2- Remove the fastening nuts from the plate pins, position the gearmotor on the foundation plate sliding the pins into the slots on the casing (7). Make sure that the pinion faces the gate.
- 3- Make the necessary adjustments to level the gearmotor, raising or lowering it by turning the adjusting screws A(8). At first hold the gearmotor raised by 2-4 mm and then lower it after having secured the rack (8).
- 4- Fit the 4 washers and tighten the 4 nuts to secure the gearmotor parallel to the gate (remember to hold the gearmotor raised by 2-4 mm) (8).
- 5- It is recommended to maintain the distances (8 9 15).

FITTING THE RACK

- 1- Manually move the gate to the closed position;
- 2- unlock the gearmotor (see paragraph Unlocking Device);
- 3- arrange the rack (optional)(10-11-12);
- 4- place the first element of the rack on the pinion in such a way that it protrudes 50 mm from the gearmotor (13) creating the space required for the limit switch bracket;
- 5- secure the element in the slot with a screw (or spacer depending on the type of rack chosen (10 11 12). It is advisable to tighten the rack retaining screws at the top of the slot so that the gate can be raised and the necessary clearance between the rack and pinion maintained should the gate lower;
- 6- continue fitting the rack, aligning the modules one after another; to properly secure the modules, use a piece of rack of about 150 mm to allow for tooth timing (14). Once the last module has been secured, cut off the protruding part with a saw.
- 7- when all the modules have been fitted, manually carry out various gate opening and closing manoeuvres to check that it slides smoothly without friction;
- 8- lower the operator by turning the 4 adjusting screws A(8) and lock the gearmotor leaving a clearance of 2 mm between the pinion and the rack (15) to ensure that the weight of the gate does not negatively affect the gearmotor shaft.

FITTING THE LIMIT SWITCHES

Each automated device kit for sliding gates contains two limit switches: one to identify the stopping point of the gate during opening and the other one to identify the stopping point of the gate during closing.

Each limit switch is supplied with the magnet already fitted, identified by the letter "O" for opening and "C" for closing (18-21).

UNLOCKING DEVICE

If the gate needs to be operated manually, insert the triangular key provided in the dedicated seat on the gearmotor (22) and turn it anticlockwise. Manually open or close the gate. To relock the gearmotor, fully turn the triangular key clockwise. Manually and carefully move the gate until it locks.

Should you wish to replace the unlocking device provided on the gearmotor with an unlocking device with personalised key, proceed as follows:

- 1- remove the triangular unlocking key (if inserted);
- 2- with a star-tip screwdriver undo the screw inside the triangular key unlocking device (23);
- 3- remove the unlocking device (24 25);
- 4- take the unlocking device with personalised key and fit the two springs in their housings (make sure that the key is in horizontal position 26);
- 5- Fit the new device in its seat, then press and turn the key 90° anticlockwise (27). Secure the device with the dedicated pins in the two side holes, exercising slight pressure for better coupling (28).

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FITTING THE BATTERY COVER

Optional code AJ00605 (29 - 30)

- 1- Remove the caps A-B (29);
- 2- Cut the casing for the cables to run through C (30);
- 3- Insert the square nuts D (31);
- 4- Position the battery charger cover E(31);
- 5- Tighten the retaining screws F (31).

FINAL TESTS

Close the gearmotor casing (32). Power the system and run a complete opening and closing cycle checking that:

- the gate moves smoothly;
- the safety devices function properly;
- the foundation plate is firmly in place;
- the gate assembly is in compliance with the current EN 12453 EN 12445 standards;
- for further details and information on the reference standards, visit our site: www.gibidi.com

MAINTENANCE

Periodically check the gate structure, in particular:

- · check perfect functioning of the rails;
- check that the rack has not lowered with the weight of the gate, since it would weigh down on the gearmotor. Should this be the case, raise the rack and retighten the screws lower down in the slot, or lower the gearmotor using the adjusting screws (15);
- · every 6 months check good functioning of the safety devices;
- unlock the operator and check that there are no points of friction along the entire travel of the gate;
- check proper functioning of the unlocking device (see the relative paragraph);
- check that there is no dirt or fragments on the pinion.

Gi.Bi.Di. S.r.I. reserves the right to change the technical data without prior notice in relation to product development.



CE Declaration of conformity The manufacturer: GI.BI.DI. S.r.I. Via Abetone Brennero, 177/B, 46025 Poggio Rusco (MN) ITALY Declares that the products: **ELECTROMECHANICAL GEARMOTOR SL 544** Are in conformity with the following CEE Directives: LVD Directive 2006/95/CE and subsequent amendments; • EMC Directive 2004/108/CE and subsequent amendments; and that the following harmonised standards have been applied: • EN60335-1, • EN61000-6-1. EN61000-6-3 The Legal Representative Michele Prandi Date 11/09/2017

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