

ACER

V.1

GB ELECTROMECHANICAL OPERATOR FOR SLIDING GATES
INSTRUCTIONS FOR INSTALLATION, USE AND MAINTENANCE

SL-PRO
montage team





TECHNICAL FEATURES

LIFE home integration reserves the right to make changes to technical characteristics at any time and without prior notice, without changing its intended use and function.

ACER: Irreversible electromechanical operator for sliding gates with optical/magnetic encoder and built-in ECU							
Version:		ECU – 230 V ac 50 Hz			ECU – 24 V dc		
		AC4 / AC4R	AC6 / AC6R	AC8	AC4 24 P	AC6 24 X	AC8 24 X
Built-in ECU		RG1A / RG1R	RG1A / RG1R	RG1A	RG1 24 P	RG1A 24 X	RG1A 24 X
Power supply	V	230 Vac 50 Hz					
Motor power supply	V	230 V a.c.			24 V d.c.		
Motor power	W	250	280	300	40	80	90
Power input from mains 230V / Max. motor absorption at pick-up 24 V	A	1.1	1.2	1.4	5	6	12
Capacitor	µF	14	14	16	NO		
Thrust	N	500	700	900	300	500	700
Lubrication	Tipo	grease			oil	grease	oil
Thermal protection device	°C	140			NO		
Limit switch		2 electromechanical or magnetic limit switches in M version					
Encoder		optical			magnetic	optical	
Speed	m/min	10			11		
External toothed wheel module		4					
Number of teeth external toothed wheel		20			16		
Work cycle	%	35			80		
Nominal work time	min	10			20		
Battery recharge time (optional)*		BATTERY NOT PROVIDED			48		
Opening cycles with charged battery*		BATTERY NOT PROVIDED			20	15	10
Operating temperature	°C	from -20 a +70					
Protection class	IP	54					
Motor insulation class		F			D		
Assembly		horizontal with dedicated anchorage plate					
Dimensions / weight		170 (plate) x 342 x 288 (h) mm / 10 kg					
Use in acid, saline or potentially explosive environment		no					
Max gate weight	kg	400	600	800	400	600	800

* for 2 Ah batteries (optional and installed in control unit).

1.0 INSTALLATION

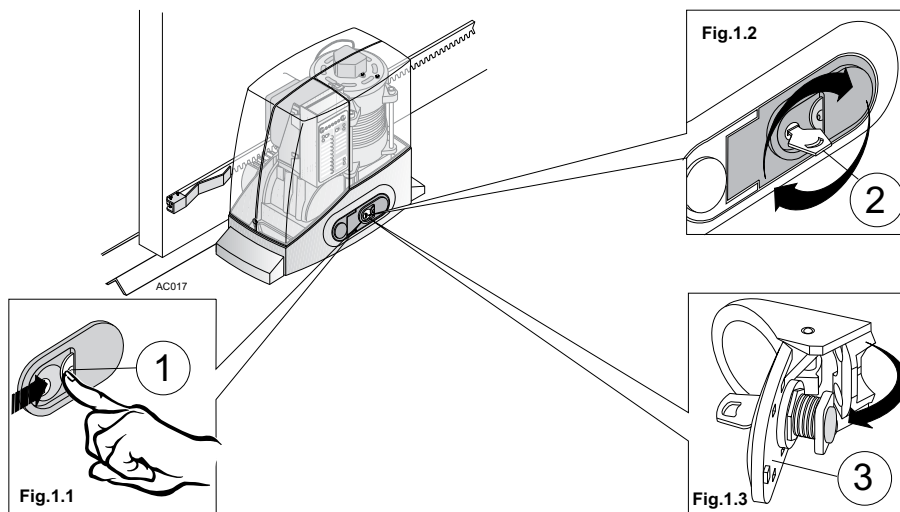
1.1 Operator release

Attention:

- The fitter must permanently fix the label describing the manual release operation close to the manual release key.
- The activation of the manual release could cause an uncontrolled movement of the gate in the event of mechanical damage or unbalanced conditions.
- Before performing the manoeuvre switch off the electricity supply to the automation.
- To avoid breaking the key, do not apply excessive force.

- Slide the lock protection cover (1). See **fig. (1.1)**.
- Insert the key (2) in the lock and turn to the right through 90°. See **fig. (1.2)**.
- Gently pull the key outwards until the hatch is protruding, then pull outwards until it stops. See **fig. (1.3)**.
- The operator is now free and can be moved by hand. A microswitch assembled on the blockage device prevents the motor from operating when the power comes back on.
- To reconnect the transmission, turn the opposite way and move the gate manually until it hitches up.

Figure (1)



1.2 Installing operator components: positioning and installation of the anchorage plate

The area in which the operator is installed must provide adequate space for performing maintenance and manual release operations.

a) Adhere to the dimensions in **fig.2**.

Fig. (2)

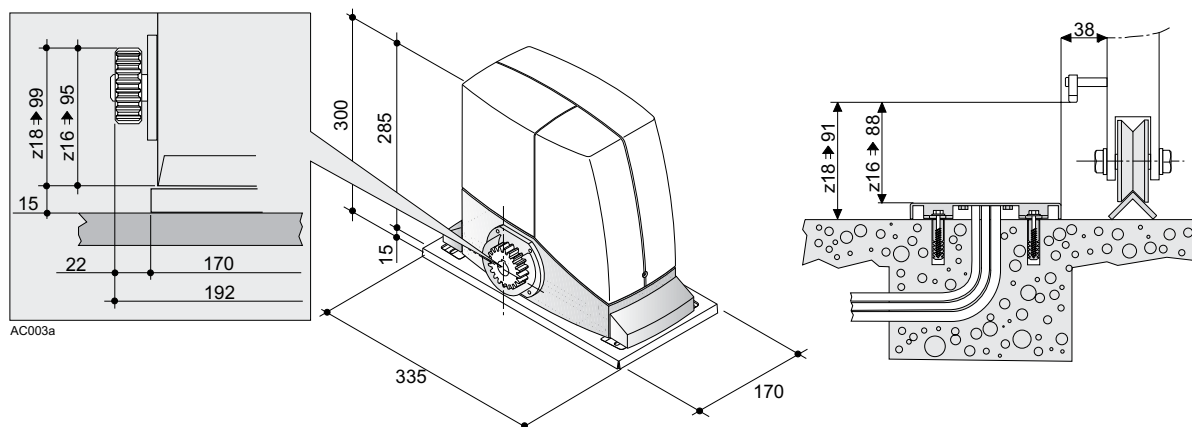
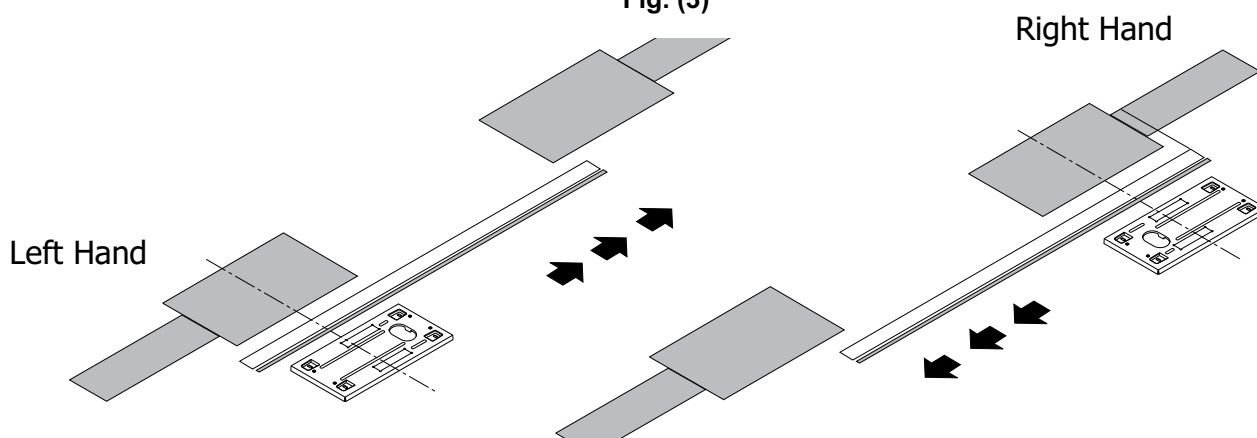


Fig. (3)



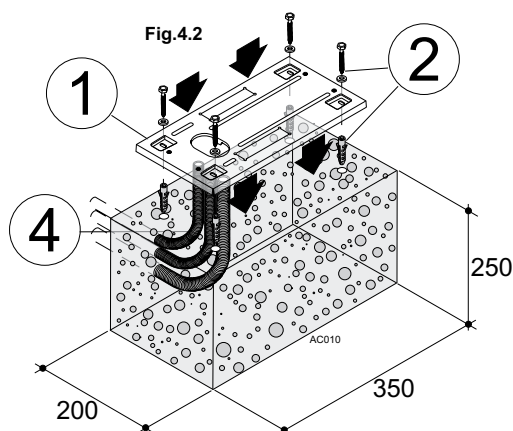
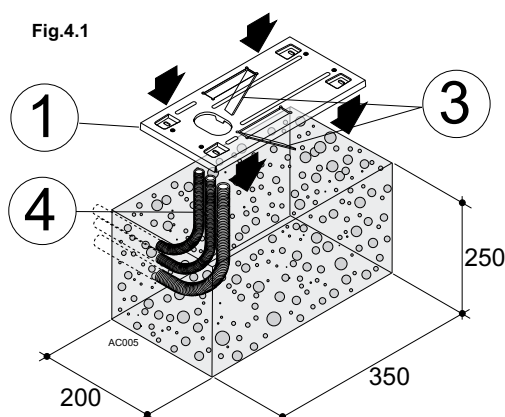
b) Observe the orientation in **fig. (3)** for positioning the operator anchorage plate (R – L).

c) Refer to **fig. (2.2)** for the respective heights for 16 or 18-tooth pinions.

d) Lay the electric cable pipes (4), allowing them to protrude and plugging them to prevent them from filling with debris.

Fasten the anchorage plate (1) to the concrete base with 4 expanding screw anchors (2), see **fig.(4.2)**; or sink in the fresh concrete folding the two "L"s (3), see **fig.(4.1)**.

Fig. (4)



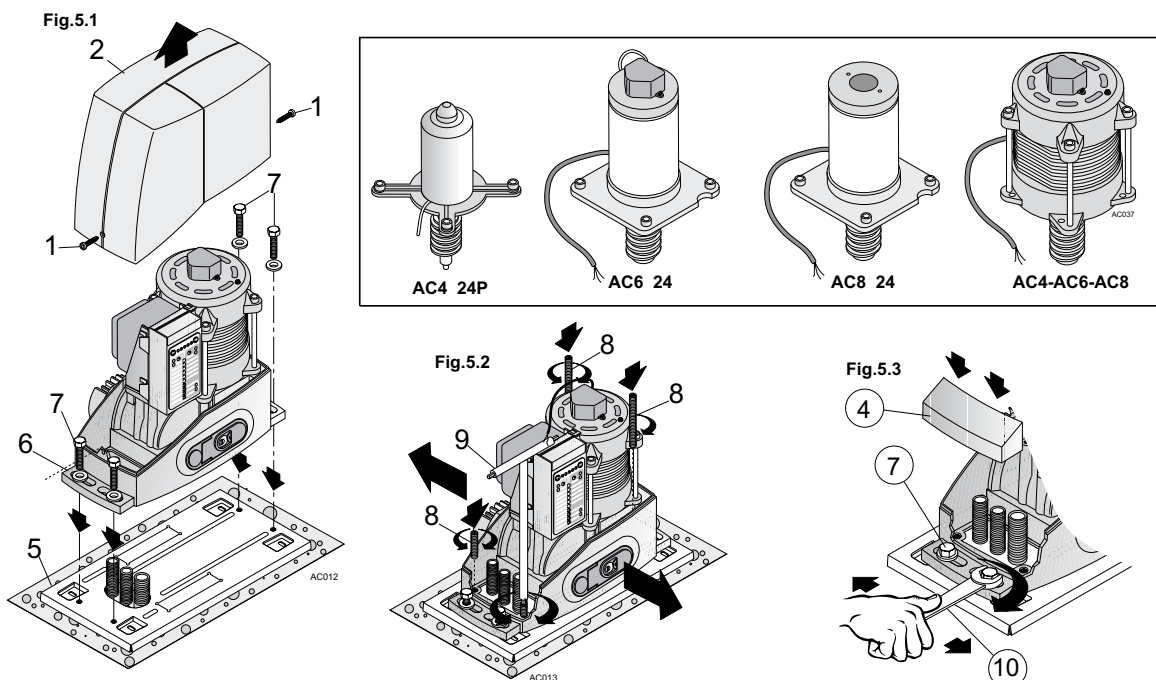
ATTENTION: If the operator is subject to heavy work conditions or if the weight of the leaf is over 300 kg, the anchorage plate (1) must be sunk into the concrete.



1.3 Installing operator components: positioning and installation of the operator

- Remove the lid (2) of the operator by loosening the screws (1); rest the operator on the anchorage plate and manually turn the 4 M10 screws (7) with the relative washers through 3/4 of a revolution. See **fig. (5.1)**.
- Vertically adjust the operator using the 4 dowels (8) levelling it with the spanner (9); adjust the operator so that it is parallel to the gate. See **fig. (5.2)**.
- Definitively fasten the operator by locking the 4 M10 screws (7) and the relative washers with a fixed or tube wrench (10). Assemble the covers on the clamping feet (4). See **fig.(5.3)**.

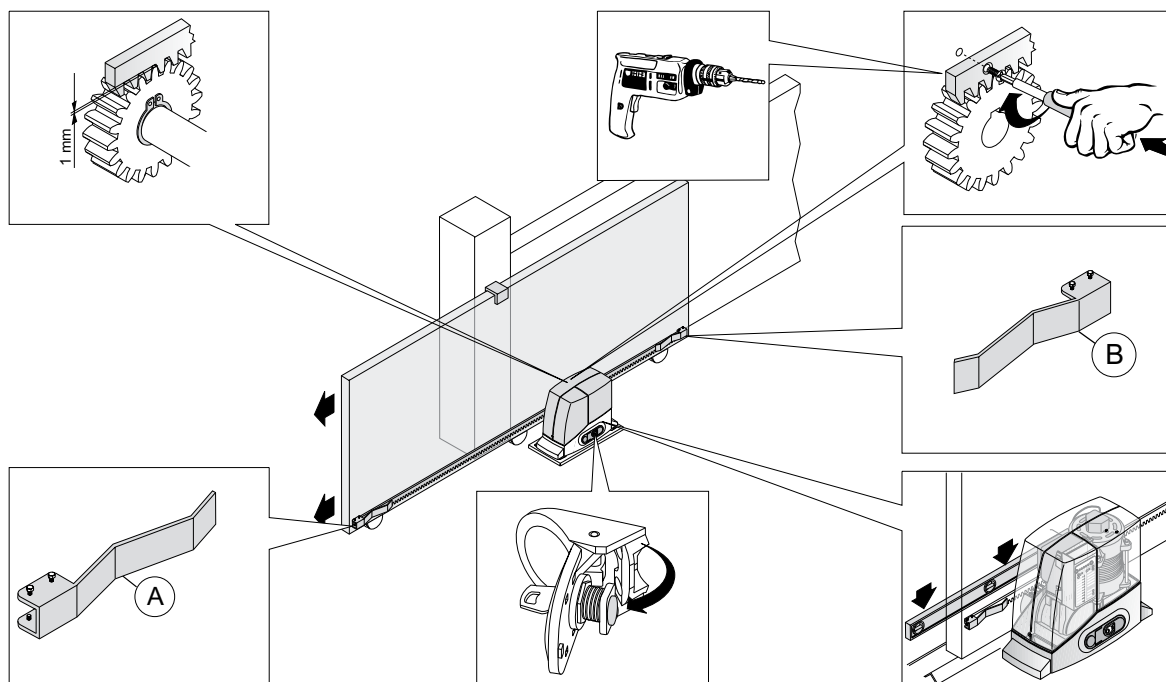
Fig. (5)



1.4 Installing operator components: rack assembly

Assemble the "gate open" (A) and "gate closed" (B) limit switch brackets at the ends of the rack, fastening them with the screws provided in the pack as indicated in **fig. (6)**. Remember that the gate will travel 2-3 cm more, after the intervention of the limit switch, consequently adjust the position of the brackets so that the gate does not collide with the mechanical stop plates.

Fig. (6)



2.0 WIRING AND CONNECTIONS

- The operator must be connected to the relative Life electronic control unit (ECU).
 - All wiring and connection operations must be carried out with the control unit disconnected from the electricity supply. If the disconnection device is not in view, display a sign reading: "ATTENTION: MAINTENANCE WORK IN PROGRESS".
- The internal linear electromechanical operator wiring performed by the Manufacturer, may not be modified under any circumstances.

2.1 Electric connections

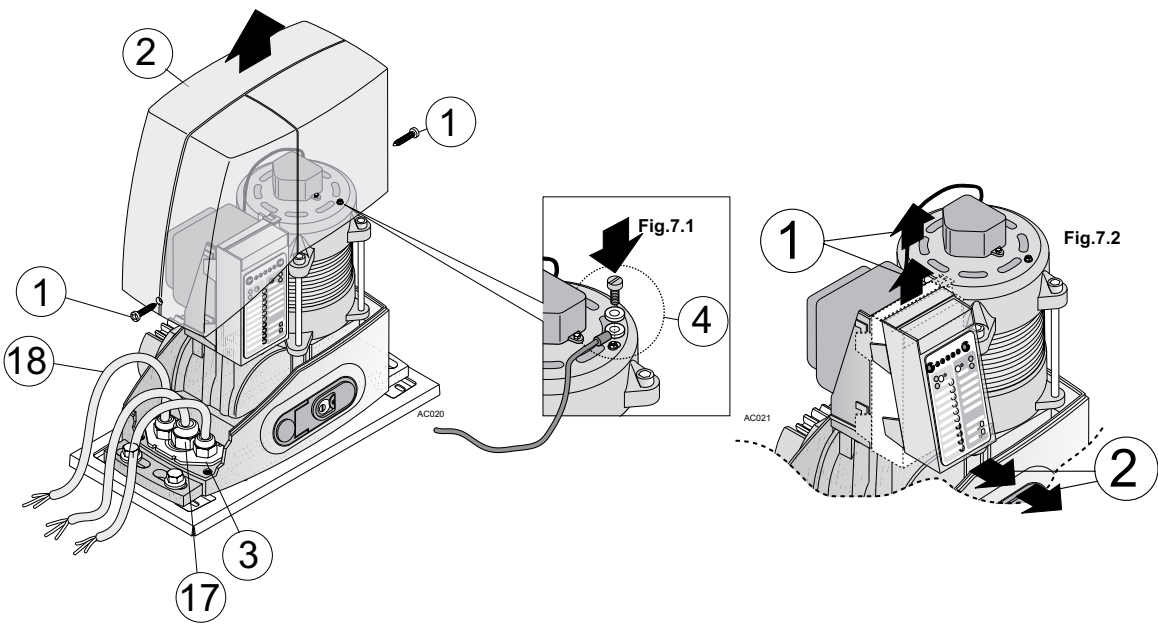
Connection	Type of cable
Electricity supply line	3x1,5 mm ² cable

- ATTENTION: the cables used must be suited to the type of installation. It is the Fitter's responsibility to choose appropriate material.**
- The power cable may be no lighter than 60245 IEC 57 (HO5RN-F).
 - Inside the power cable, one wire must be yellow and green.
 - The power cable coating must be composed of a polychloroprene sheath.
 - All wires must be unsheathed as little as possible (6mm at the most) and as close as possible to the connection terminals, in order to prevent accidental contact with live parts in the event that cables disconnect from the terminals.
 - Do not pre-seal cables to be fastened to the terminals using screws.
 - A power cable-fastening device must be provided. Assemble the power cable so that if it comes out of its fastening device, the neutral and live wires are taut before the earth wire.

2.2 Introducing the electric wires into the operator

- To access the ECU remove the cover (2) of the reduction gear removing the two lateral clamping screws (1).
- Open the pre-punched holes in the cable gland door (3), insert the cable glands (17), then insert the cables (18) needed for the connections (keep 230 V and very low voltage cables separate). Leave the cables about 40cm longer
- Assemble the cable gland door making it stick well to the edges of the seat in the operator base to prevent access to insects and dirt. See fig. (7).

Fig. (7)



2.3 Electronic control unit connections

Fitters must make the connections of the 230 Vac 50 Hz electricity supply, and the various automation devices. Connections between the ECU, motor, encoder and autotransformer have already been performed by the Manufacturer.

ATTENTION: for safety reasons, it is essential to earth the motor.

- Crimp the yellow and green wire on the power cable to the loop on the upper sleeve, at the point marked by the earth symbol as indicated in fig. (7.1). To facilitate ECU connection operations and programming, it can be removed from its housing. The operation is straightforward and does not require the use of any tools:
- remove the ECU by pulling upwards and, compatibly with the length of the cables, rest on the edge of the operator base or hold. Once the wiring and/or programming work is complete, place the control unit back in its recess by pressing lightly until the 4 clips snap in. See fig. (7.2).



GENERAL INFORMATION

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INFORMATION ON THE MANUFACTURER

LIFE home integration is the manufacturer of the **ACER** operator (and will hereinafter be referred to as manufacturer) and the owner of all rights concerning this document. The Manufacturer's information required by Machinery Directive 98/37/EC is given below:

• Manufacturer:	LIFE home integration
• Address:	Via I Maggio, 37 – 31043 FONTANELLE (TV) Italia
• Telephone:	+ 39 0422 809 254
• Fax:	+ 39 0422 809 250
• http:	www.homelife.it
• e-mail:	info@homelife.it

The identity plate bearing the information on the Manufacturer of the operator is fixed to the control unit. The plate specifies the type and date (month/year) of manufacture of the automation. For further information on technical or commercial issues and technician call-out and spares requests, Clients may contact the Manufacturer or area representative from which the product was purchased.

INTENDED USE

- **ACER operators are designed for opening and closing residential-type sliding gates only. Improper use or use on gates larger than those indicated in the TECHNICAL DATA chapter will be considered non-conform to the intended use. The Manufacturer declines all responsibility for improper use. The owner accepts full responsibility for improper use, which will result in the warranty being rendered void.**
- **Any usage differing from that described above is forbidden.**
- **The operator may not be installed or used in potentially explosive environments.**
- **The Fitter must ensure that the environment in which the automation is installed is conform to the operator's temperature range (see Technical Data chap.).**
- **The operator is not suitable for use on gates with built-in doors unless the automation is prevented from functioning when the door is open.**
- **Motorised gates must conform to current European standards and Directives, including EN 12604 and EN 12605.**
- **The operator may only be used when in perfect working order and in compliance with the intended use, in the awareness of safety and hazard conditions and in observance with the instructions for installation and use.**
- **Any dysfunctions that may pose threats to safety must be eliminated immediately.**
- **The gate must be stable, properly hung and resistant to flexion (it must not bend during opening and closure movements).**
- **The operator cannot compensate for faulty or incorrectly hung gates.**
- **The operator may not be used in environments prone to flooding**
- **Do not use the operator in environmental conditions characterised by harsh atmospheric agents (e.g. Salty air).**

SAFETY INSTRUCTIONS AND WARNINGS

- **These general rules must always be respected during the installation, connection, testing, trial run, use and maintenance of the automation.**
- **The Manufacturer declines responsibility for damage or injury caused by non-conformity with the information supplied concerning installation, trial run, use and maintenance contained in this manual, and the failure to observe the safety instructions given below.**
- **The installation, connection, testing, trial run and maintenance of the operator must be performed by a COMPETENT PERSON aided and supervised by a PROFESSIONAL FITTER.**
- **Given the technical, procedural, regulation and legal implications of the work, unauthorised fitters are not permitted.**
- **Installation requires a practical and theoretical knowledge of mechanics, electronics and electrics, and of sector laws and standards.**
- **Amateur installation is strictly forbidden as it does not comply with current standards and laws and therefore does not guarantee the safe operation of the automation.**
- **Do not proceed with installation, connection and trial run in the event of doubts or indecision of any kind.**
- **This manual must be read carefully and understood before installing the operator. If doubts arise during installation, contact a PROFESSIONAL FITTER or the MANUFACTURER.**
- **Do not perform adjustments and/or parameter memorisation before installation is complete and only if you have understood the procedures described in this manual.**
- **Only mount the operator on gates that are perfectly aligned with the sliding tracks and are properly hung. A gate that is not correctly aligned or hung can cause serious injury and/or damage to the operator.**
- **The Manufacturer declines all responsibility for damage and faults to the operator caused by non-observance of the instructions contained in this manual.**
- **Keep this manual in a safe and easily accessible place so that it can be consulted rapidly when necessary.**
- **During installation, connection, trial run and usage of the operator, observe all applicable accident prevention and safety regulations.**
- **In the interests of safety and optimal functioning of the operator, only use original spares, accessories, devices and fastening apparatus.**
- **Do not perform alterations on any operator device or component. This type of operation may cause malfunctions. The Manufacturer declines all responsibility for damage caused by products that have been modified.**
- **The operator should not be used until the setting up procedure described in the STARTING UP chapter has been performed.**
- **Should liquids penetrate inside the operator, disconnect the electricity supply and contact the Manufacturer's Assistance Service immediately; use of the operator in such conditions may cause hazard situations.**
- **In the case of faults or problems that cannot be resolved using the information contained in this manual, contact the Manufacturer's assistance service.**

Storage instructions and warnings

- **The manufacturer declines all responsibility for damage and faults to operator functioning caused by non-compliance with the storage instructions given below.**
- **The operator must be stored in closed, dry places, at room temperatures of between -20 and +70°C.**
- **Keep the operator away from sources of heat and naked flames, which could damage it and cause malfunctions, fires or hazard situations.**
- **Keep the operator in a horizontal position, but not resting on the ground.**

Indications and warnings for use

- **It is the fitter's duty to perform risk analysis and inform the user/owner of any existing residual risks. Any residual risk detected must be recorded in writing in this manual.**
- **The following residual risks are usually present in moving gates: impact and crushing against the main closure surface; impact and crushing in the opening area; shearing between sliding leaf and fixed part of the track and support during movement; mechanical risks caused by movement.**
- **The Manufacturer will not accept responsibility for damage or injury caused by the non-observance of the information on use contained in this manual, and the failure to observe the safety indications given below.**
- **The Manufacturer declines responsibility for damage and malfunctions caused by non-compliance with the instructions for use.**
- **Keep this manual in a safe, easily accessible place, so that it can be consulted rapidly when necessary.**
- **Never touch the gate or moving parts when they are in motion.**
- **Remain at a safe distance when the gate is in motion: only pass when the gate is completely open and immobile.**
- **Prevent children from playing or standing in the vicinity of the gate or the control organs (radio control), the same precautions should be adopted for disabled persons and animals.**
- **In the event of malfunctions (noisiness, jerky movements, etc.) suspend the use of the automation immediately: failure to observe this rule may entail serious hazards, risks of accidents and/or serious damage to the gate and the automation. Contact a PROFESSIONAL FITTER and in the meantime use the gate manually by disconnecting the operator (see the OPERATOR RELEASE chapter).**
- **In order to maintain the operator in efficient conditions, ensure that the operations indicated in the MAINTENANCE chapter are performed at the frequency indicated by a PROFESSIONAL FITTER.**
- **Should liquids penetrate inside the operator, disconnect the power supply immediately and contact the Manufacturer's Assistance Service; the use of the operator in such conditions may cause hazard situations.**
- **If a problem arises that cannot be resolved using the information contained in this manual, contact the Manufacturer's assistance service.**

Instructions and warnings for installation

- **Before commencing installation read the SAFETY INSTRUCTIONS AND WARNINGS chapter carefully.**
- **The person who installs the operator is responsible for performing risk analysis and regulating the automation's safety devices consequentially.**
- **Before commencing installation, check whether further devices or materials are needed to complete the automation in order to suit the specific situation in which it will be used.**
- It is strictly forbidden to motorise a gate that is not already efficient and secure as the automation cannot resolve faults caused by incorrect installation or poor maintenance of the gate.
- During installation, make constant reference to harmonised standards EN 12453 and EN12445.
- Ensure that the individual devices to be installed are suitable for the automation that one intends to create, paying careful attention to the points raised in the TECHNICAL DATA chapter. Do not proceed if even just one device is unsuitable for the intended use.
- Ensure that the place of installation is not prone to flooding, does not contain sources of heat or naked flames, fires or hazard situations in general.
- During installation, protect automation components to prevent liquids (e.g. rain) and/or foreign bodies (earth, gravel, etc) penetrating inside.

Preliminary checks

Before commencing installation, the following preliminary checks must be performed:

- 1) The weight and dimensions of the gate must not exceed the limits for use (see the TECHNICAL DATA chap.), if they exceed such limits, the operator may not be installed.
- 2) The gate structure must be suitable for the installation of the operator and conform to current standards.
- 3) The gate's movement in both opening and closure must be uniform, without points of greater resistance or friction.
- 4) The gate must be properly hung and without risks of derailment, this can be checked by sliding the gate back and forth several times.
- 5) The gate must be hung flat, i.e. it must not move when left in any point of the sliding tracks. Ensure that the gate does not bend or deviate from its course during movement.
- 6) The gate must be perfectly flat in to the plane to which the sliding track is fixed, in order to prevent irregular movement during operation.
- 7) The limit switches must be sufficiently sturdy and there must be no risk of derailment should the gate collide with the limit switches.
- 8) The operator installation area must not be prone to flooding and therefore it may not be installed in potholes, trenches, dips in the ground, etc.
- 9) The cement base on which the operator must be installed must be adequately solid and compact.

MAINTENANCE INSTRUCTIONS AND WARNINGS

- **Once the automation has been tested, the parameters set must not be altered. If further adjustments (e.g. alterations to the voltage value) are made, all the checks required for testing and compliance with standards must be repeated.**
- **The Manufacturer declines responsibility for damage or injury caused by non-compliance with the information provided in this manual and the safety instructions provided below.**
- **The Manufacturer declines all responsibility for damage and malfunctions deriving from non-compliance with the maintenance instructions.**
- **In order to keep the operator efficient and safe, follow the cleaning, checking and routine maintenance procedures as described in this manual. This is the owner's duty.**
- **Any checking, maintenance or repair work must be conducted by a PROFESSIONAL FITTER**
- **Always switch off the electricity supply in the event of malfunctions, breakdowns and before any other operations in order to avoid the gate from being activated.**
- **The owner is not authorised to remove the operator lid as it contains live parts.**
- **If the power cable is damaged, it must be replaced by the Manufacturer or its technical Assistance service or in any case a person with a similar qualification in order to avoid risks.**
- The owner is NOT authorised to use the programming keyboard.
- Use original spare parts, accessories and clamping material only.
- Do not perform technical or programming modifications on the operator. Operations of this type may cause malfunctions and/or risk of accidents. The Manufacturer declines responsibility for damage deriving from modified products.
- In the event of intervention of automatic or fuse switches, before restoring function conditions identify and eliminate the fault. Request the intervention of a PROFESSIONAL FITTER.
- If a fault that cannot be solved following the information contained in the present manual, contact the manufacturer's assistance service.
- All maintenance, repair or replacement of parts must be recorded in the maintenance log, which is SUPPLIED AND INITIALLY FILLED IN BY THE FITTER.
- Inspect the installation frequently to ensure that there are no signs of mechanical unbalance, wear or damage to the wires and assembled parts: do not use the automation until any necessary repairs or adjustments have been made.

Cleaning the automation

ATTENTION:

- **Never wash the operator using water sprays or washing devices.**
- **Do not use corrosive substances, solvents, thinners or spirit to clean the operator.**
- **Switch off the electricity supply to the operator before cleaning.**

- a) Automations are almost always installed outdoors and therefore they are subject to climatic variations and exposed to the elements, which transport debris that may cause problems.
- b) The entire area in which the automation is installed must be kept clean to avoid malfunctions and/or faults.
- c) Keep the track on which the gate runs clean by sweeping stones, gravel, and mud off using a broom.
- d) Clear the area in which the operator is installed to prevent stones, gravel, mud, dry leaves, pine needles etc. from accumulating around the pinion, thus causing damage to the pinion, rack, limit switch and operator.

Routine maintenance

Every six months contact a PROFESSIONAL FITTER to perform the following operations.

- A series of opening and closing checks using radio controls and selectors, using all the system's components (photocells, flashing light, etc.). Ensure that the operator performs the desired action.
- Grease the operator's nut-screw-bushing unit and the gate hinges.
- Repeat the series of tests envisaged for operator testing (see INSTALLATION MANUAL – Testing and first run chapter).

DEMOLITION AND DISPOSAL

ACER operators are constituted by various materials, which implicates different disposal modes. Materials such as aluminium, plastic, electric cables, etc., can be recycled; batteries, electronic cards, etc. must be disposed of.

ATTENTION:

- **The disposal of batteries, cards and electric and electronic components must comply with legislation and local regulations on toxic, harmful and polluting substances.**
- **Disconnection from the main supply must always be performed by a qualified electrician using suitable equipment.**

MANUFACTURER'S DECLARATION OF CE CONFORMITY

Declaration of Conformity



under Directive 98/37/EC, appendix II, part B (Manufacturer's Declaration of CE Conformity).

LIFE home integration
Via 1 Maggio, 37
31043 FONTANELLE (TV) – Italia

declares that the following product:
ACER operator for sliding gates

Satisfies the essential requisites established in the following directives:

- Machinery Directive 98/37/EC (ex 89/392/EEC) and subsequent amendments,
- Low voltage directive 73/23/EEC and subsequent amendments,
- Electromagnetic compatibility directive 89/336/EEC and subsequent amendments,
- Radio and telecommunications equipment directive 1999/5/EC and subsequent amendments.

and satisfies the following standards

- EN 12445:2000 Industrial, commercial and garage doors and gates – Safety in the usage of motorised doors – testing methods.
- EN 12453:2000 Industrial, commercial and garage doors and gates – Safety in the usage of motorised doors - Requisites.
- EN 60204-1:1997 Machinery safety – Electric equipment of the machine – Part 1: general rules.
- EN 60950 Information technology equipment -Safety - Part 1: General requisites.
- ETSI EN 301489-3:2001 Electromagnetic compatibility for radio equipment and appliances.
- EN 300220-3:2000 Radio equipment and systems – short band devices – Technical characteristics and testing methods for radio apparatus with a frequency of 25 to 1000 MHz and powers of up to 500mW.

The Manufacturer also declares that it is not permitted for the abovementioned components to be used until such time as the system in which they are incorporated is declared conform to directive 98/37/EC.

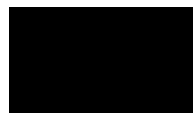
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Name of Signor:

Faustino Lucchetta

Position:

Signature:





Instruction issue V.1