ELECTROMECHANICAL OPERATOR FOR SLIDING GATES

INSTRUCTIONS FOR INSTALLATION, USE AND MAINTENANCE

AC8R DL
AC12R DL

LIFE
home integration®
STANDARD INSTALLATION

Fig.1: Components and devices of a typical automation.

Fig.2: Description of the contents of the ACER pack.
## 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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AC4R DL</td>
<td>AC6R DL</td>
</tr>
<tr>
<td></td>
<td>AC8R DL</td>
<td>AC12R DL</td>
</tr>
<tr>
<td></td>
<td>AC3R M DL</td>
<td>AC6R M DL</td>
</tr>
<tr>
<td>Built-in ECU</td>
<td>RG1R DL</td>
<td>RG1R DL</td>
</tr>
<tr>
<td></td>
<td>RG1R DL</td>
<td>RG1R 24 DL</td>
</tr>
<tr>
<td>Power supply</td>
<td>V</td>
<td>z H 0 5 c a V 0 3 2</td>
</tr>
<tr>
<td>Motor power supply</td>
<td>V</td>
<td>. c . d . c . d</td>
</tr>
<tr>
<td>Motor power</td>
<td>0 8 2 0 5 2 350</td>
<td>150 W 50</td>
</tr>
<tr>
<td>Power input from mains 230V / Max. motor absorption at pick-up 24 V</td>
<td>A 1,1 1,2 1,4 1,6 6 6</td>
<td></td>
</tr>
<tr>
<td>Capacitor</td>
<td>µF 14 14 16 16 16</td>
<td></td>
</tr>
<tr>
<td>Thrust</td>
<td>N 500 700 900 1200 300 500</td>
<td></td>
</tr>
<tr>
<td>Lubrication</td>
<td>Type grasso</td>
<td>olio olio grasso</td>
</tr>
<tr>
<td>Thermal protection device</td>
<td>°C 140</td>
<td>NO</td>
</tr>
<tr>
<td>Limit switch</td>
<td>2 electromechanical or magnetic limit switches in M version</td>
<td></td>
</tr>
<tr>
<td>Encoder</td>
<td>optical magnetic</td>
<td></td>
</tr>
<tr>
<td>Speed</td>
<td>m/min 10 8 6 12 11</td>
<td></td>
</tr>
<tr>
<td>External toothed wheel module</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Number of teeth external toothed wheel</td>
<td>1 16 8 1 6 1</td>
<td></td>
</tr>
<tr>
<td>Work cycle</td>
<td>0 8</td>
<td></td>
</tr>
<tr>
<td>Nominal work time</td>
<td>min 10 20</td>
<td></td>
</tr>
<tr>
<td>Battery recharge time (optional)*</td>
<td>BATTERY NOT PROVIDED 48</td>
<td></td>
</tr>
<tr>
<td>Opening cycles with charged battery*</td>
<td>BATTERY NOT PROVIDED 10</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>°C from -20 a +70 from -20 a +70</td>
<td></td>
</tr>
<tr>
<td>Protection class</td>
<td>IP 44 / 55** 44 / 55**</td>
<td></td>
</tr>
<tr>
<td>Motor insulation class</td>
<td>F D</td>
<td></td>
</tr>
<tr>
<td>Assembly</td>
<td>horizontal with dedicated anchorage plate</td>
<td></td>
</tr>
<tr>
<td>Dimensions / weight</td>
<td>170 (plate) x 342 x 288 (h) mm / 10 kg</td>
<td></td>
</tr>
<tr>
<td>Don't use in acid, saline or potentially explosive environment</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Max gate weight</td>
<td>kg 400 600 600 1200 300 600</td>
<td></td>
</tr>
</tbody>
</table>

* For 2 Ah batteries (optional and installed).
** For magnetic limit switch

### 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.
  a) Slide the lock protection cover (1). See fig. (1.1).
  b) Insert the key (2) in the lock and turn to the right through 90°. See fig. (1.2).
  c) Gently pull the key outwards until the hatch is protruding, then pull outwards until it stops. See fig. (1.3).
  d) 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.
  e) To reconnect the transmission, turn the opposite way and move the gate manually until it hitches up.
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)](image)

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. (3)](image)

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

a) 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).

b) 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).

c) Definitively fasten the operator by blocking 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).

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.
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

<table>
<thead>
<tr>
<th>Connection</th>
<th>Type of cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity supply line</td>
<td>3x1.5 mm² cable</td>
</tr>
</tbody>
</table>

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 (6 mm 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

a) To access the ECU remove the cover (2) of the reduction gear removing the two lateral clamping screws (1).
b) 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 40 cm longer.
c) 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).

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:

a) 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

It is strictly forbidden to copy or reproduce this instruction manual without written permission to do so by LIFE home integration and will be subject to verification. Translation into other languages of all or part of the manual is strictly forbidden without previous written authorization from LIFE home integration and will be subject to verification. All rights on this document are reserved. LIFE home integration will not accept responsibility for damage or malfunctions caused by incorrect installation or improper use of products. Users are therefore recommended to read this manual carefully. LIFE home integration will not accept responsibility for damage or malfunctions caused by the use of the operator together with the devices of other manufacturers; such action will render the warranty void. LIFE home integration will not accept responsibility for damage or malfunctions caused by non-compliance with the installation, set up, maintenance and use indications contained in this manual and the safety instructions described in the SAFETY INSTRUCTIONS AND WARNINGS chapter. With the aim of improving its products, LIFE home integration reserves the right to bring about alterations to them at any time, without giving prior notice. This document conforms to the state of the automation at which it is provided when released for sale.

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:

- **Manufacture:** LIFE home integration
- **Address:** Via Sandro Pertini 3/5 – 31014 COLLE UMBERTO (TV) Italia
- **Telephone:** +39 0438 388592
- **Telefax:** +39 0438 388593
- **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.
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 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 faults 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.
Declaration of conformity

derives that the following product:

**ACER** operator for sliding gates

Satisfies the essential requisites established in the following directives:

- 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: Industrial, commercial and garage doors and gates – Safety in the usage of motorised doors – Requisites
- EN 60950 Information technology equipment - Safety - Part 1: General requisites
- 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.

Name of Signor: MICHELE RUI
Position: PRESIDENT
Signature:

Address: Via Sandro Pertini,3/5 31014 COLLE UMBERTO (TV) Italia
Telephone: + 39 0438 388592
Telefax: + 39 0438 388593
http www.homelife.it
e-mail: info@homelife.it