

ACER

AC4 - AC6 - AC8

Operator for sliding gates



Instructions and indications for installation, use and maintenance



GENERAL INFORMATION

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LIFE home integration will not accept responsibility for damage or malfunctions caused by incorrect installation or improper use of products and 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 injury 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:

- 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).**



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1 TECHNICAL DATA

LIFE home integration reserves the right to vary the operator's technical features at any time and without giving prior notice, whilst maintaining the same intended usage and functions.

1.1 OPERATOR

ACER				
Electro-mechanical operator for sliding gates with built-in optic encoder and electronic control unit.		CENTRALE - 230 V a.c. 50Hz		
		AC4	AC6	AC8
Mains power supply	V	230 Vac 50 Hz	230 Vac 50 Hz	230 Vac 50 Hz
Motor power supply	V	230 V a.c.	230 V a.c.	230 V a.c.
Power	W	250	280	300
Absorption	A	1,1	1,2	1,4
Capacitor	μF	14	14	16
Built-in Genius control unit		yes		
Thrust	N	500	700	900
Lubrication	Type	grease	grease	oil
Thermoprotection	°C	140	140	140
Limit Switches		2 electromechanical		
Optic encoder		yes		
Speed	m/min	10	10	10
Pinion tooth module		4	4	4
Duty cycle	%	35	35	35
Nominal working time	min	10	10	10
Operating temperature	°C	from -20 to +70		
Degree of protection	IP	54		
Motor insulation class		F		
Mounting		Horizontal using the base plate provided		
Dimensions/weight		170 (plate) x 342 x 288 (h) mm / 10 kg		
Usage in acid, saline or potentially explosive atmosphere		no		
Max gate weight	kg	400	600	800



1.2 CONTROL UNIT

GENIUS			
Microprocessor control units for 230 Vac motor with encoder management		RG1	
Mains supply voltage		230 Vac 50 Hz	
Motor supply voltage		230 Vac 50 Hz	
ADJUSTMENTS		EXTRACTABLE CONNECTIONS	
Courtesy light time (sec)	0-100	Motor	yes
Pause time (sec)	0-100	Encoder limit switch opening and closure	yes
Force	no	Opening limit switch	no
Deceleration in closing (% travel)	0-20	Closure limit switch	no
Deceleration in opening (% travel)	0-20	Step by step impulsive - impulsive	yes
Obstacle detection sensitivity	yes	Open	yes
Partial/pedestrian opening (% travel)	0-100	Close	yes
SETTINGS		Partial/pedestrian opening	yes
Manual operation (dead man)	yes	Stop	yes
Semi-automatic function	yes	Photocell	yes
4-step function (open - stop - close - stop)	yes	Photocell 1	yes
2-step function (open - close)	yes	Photocell 2	yes
Condominium operating mode	yes	24 Vac (W max) gate open indicator light	3
Blackout (closed always for blackout)	yes	230 Vac (W max) flashing light	40
Pre-flashing	yes	24 Vac, Electrolock 15 VA	yes
Flashing during pause	yes	230 Vac (W max) Courtesy light	40
Phototest	yes	24 Vac (mA max) Services	200
Photo also in opening (photo1)	yes	Aerial	yes
Close after photo	yes	Extractable radio card	yes
Opening ram blow	yes		



2 SAFETY INSTRUCTIONS AND WARNINGS

2.1 GENERAL 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.

2.2 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 $+70^{\circ}\text{C}$.
- 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.

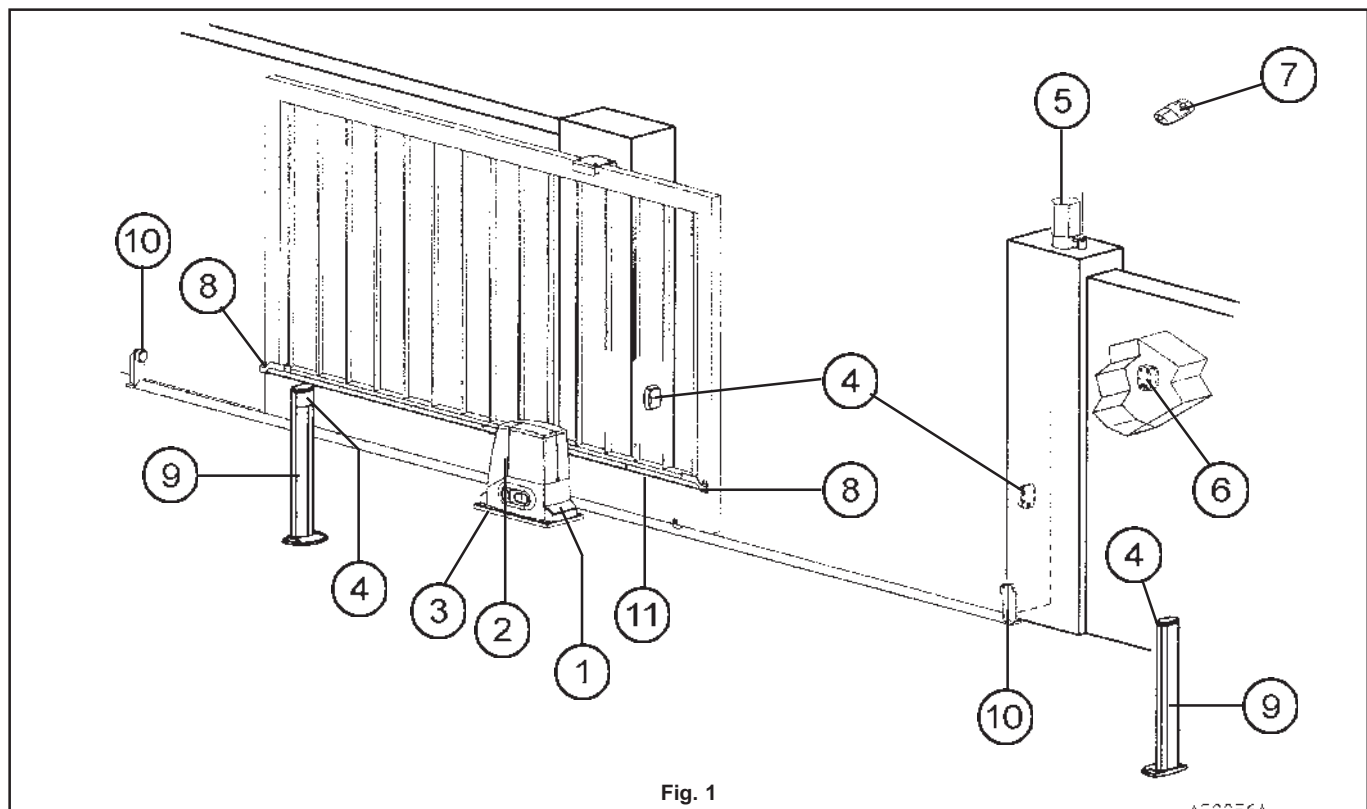


Fig. 1

AT00564

3 DESCRIPTION OF THE PRODUCT

ACER is an electromechanical operator with a control unit, fitted with a key-operated release function in order to permit the gate to be moved manually in the event of a power cut.

Tab. 1: components and devices of a typical automation - fig. 1

Pos.	Description
1.	ACER operator with control unit.
2.	Radio receiver built-into control unit.
3.	Base plate.
4.	Pair of safety photocells (composed of a TX and an RX).
5.	Flashing light with aerial.
6.	Key selector.
7.	Radio control.
8.	Right and left limit switch brackets.
9.	Photocell columns
10.	Mechanical doorstop.
11.	Rack.

Tab. 2: description of the contents of the ACER operator box ACER – fig. 2

Pos.	Description
1.	Cardboard box.
2.	ACER operator with control unit
3.	Base plate.
4.	Instruction Manual.
5.	Accessory box.
6.	2 limit switch brackets (right and left).
7.	2 release keys.
8.	4 screws and washers for fastening the operator to the base plate.

4 INSTALLATION

Before commencing installation we highly recommend reading the instructions and warnings contained in this manual carefully (see the SAFETY INSTRUCTIONS AND WARNINGS Chap) and observing the instructions it contains.

4.1 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.

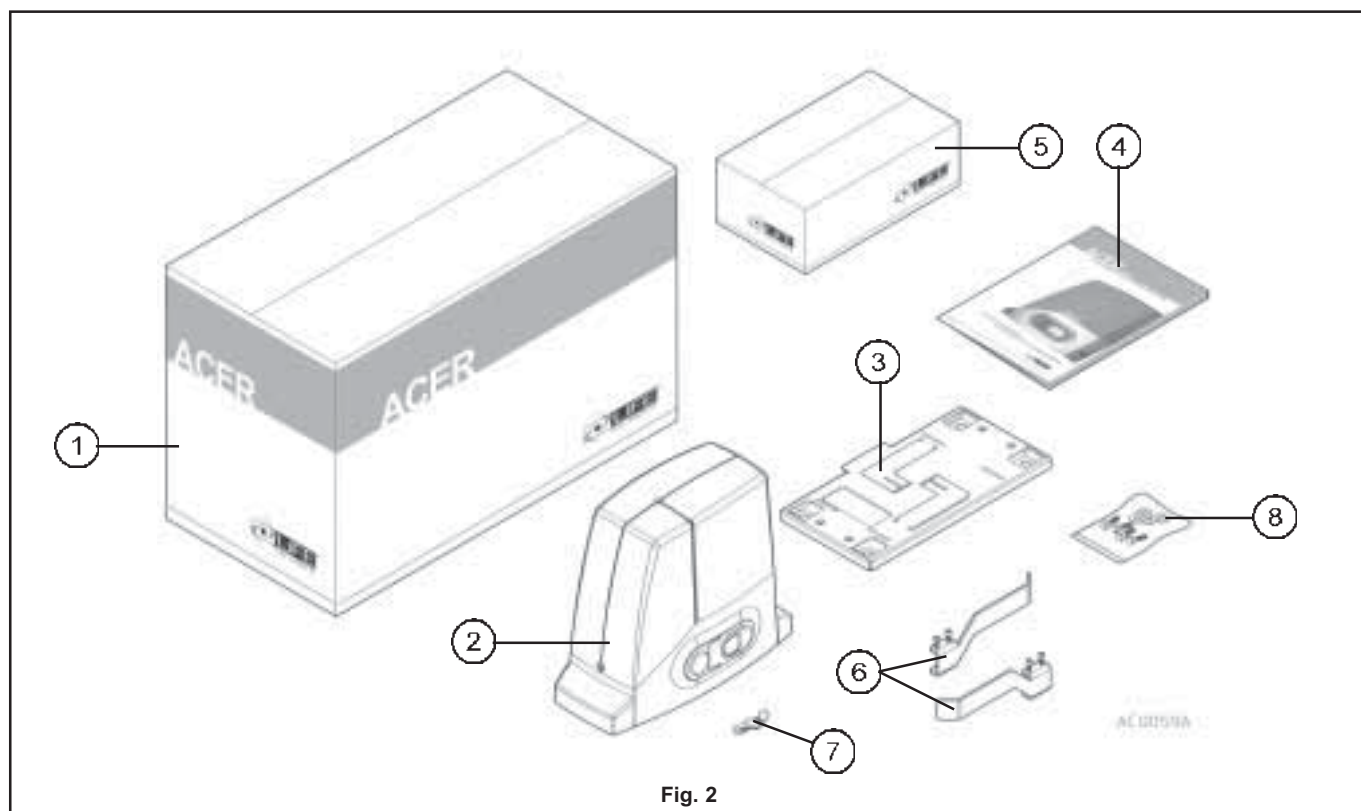


Fig. 2



4.2 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.
- Connect the control unit to a power supply line created in compliance with current regulations and earthed and fitted with a power supply selector.
 - Wrapping materials must be disposed of in compliance with local regulations.
 - Wear protective goggles when making holes for clamping.
 - In the event of works at heights of over 2m from the ground, for example for the installation of the indicator lamp or aerial, fitters must be equipped with ladders, safety harnesses, protective helmet, and all other equipment required by law and the standards governing this kind of work. Refer to Directive 89/655/EEC amended by 2001/45/EC.

4.3 INSTALLING MOTOR COMPONENTS

The area in which the operator is to be installed must be large enough to perform maintenance work and manual opening ram blow. Check the overall dimensions by referring to figure 3.

4.3.1 POSITIONING AND INSTALLING THE BASE PLATE

- For the installation of the operator base plate, observe the distances given in fig. 4.

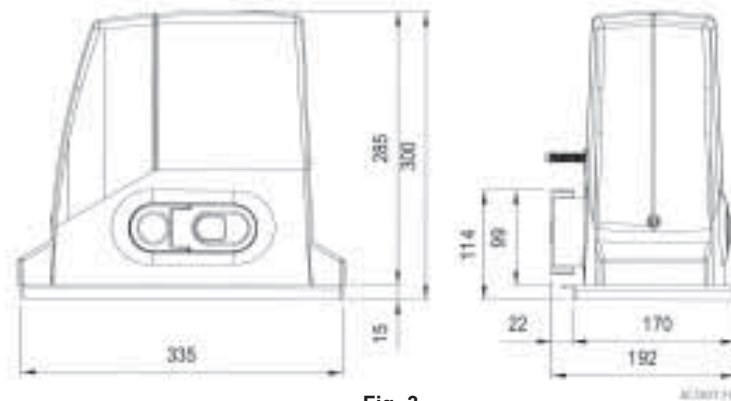


Fig. 3

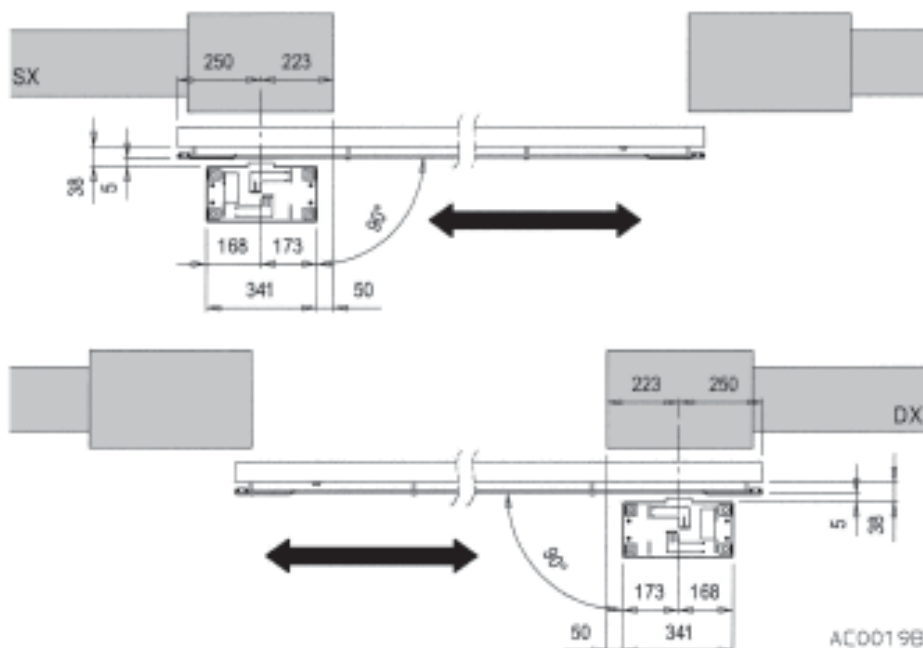


Fig. 4



b) Refer to fig. 5 for matters concerning distances.

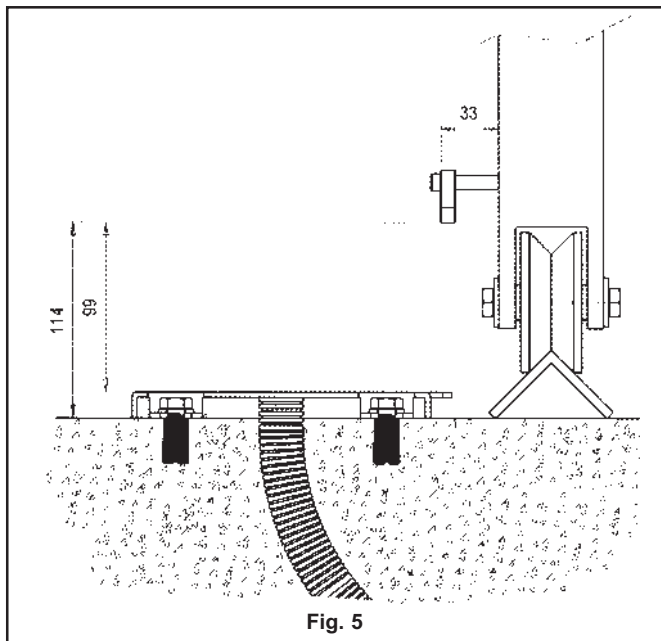


Fig. 5

- c) Make a foundation large enough to contain the concrete base for the operator's base plate, referring to the distances given in figs. 4 and 5.
- d) Take the electric cable pipes to the installation site, leaving a protrusion of 30 – 40 cm from the rest plane to be used for installation (fig. 6); plug them to prevent them from filling with debris.

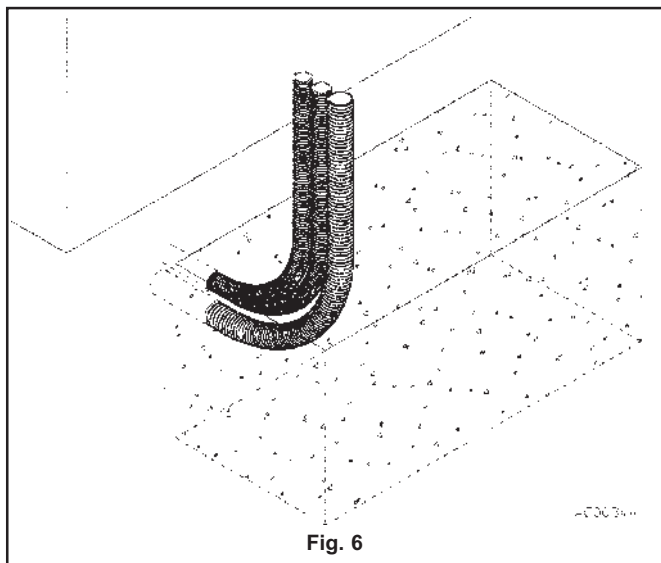


Fig. 6

e) Fold the two anchorage "L"-shaped pieces in the base plate downwards through 90° (fig. 7) and plug the threaded holes to prevent them filling with debris.

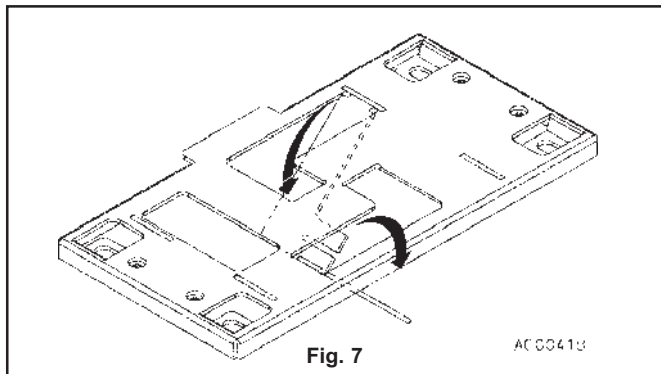


Fig. 7

f) Prepare the concrete mixture and pour it into the foundation dig, respecting the measurements given in fig. 6.

ATTENTION: if the rack is already present, pay special attention to comply with the measurements (fig. 5) in order to be able to insert the pinion underneath the rack correctly.

g) As soon as the concrete has been poured in, position the base plate so that the tab (1 fig. 8) faces towards the gate, then immerge the L-shaped anchors into the concrete, threading the electric cable tubes through the hole provided (2 fig. 8).

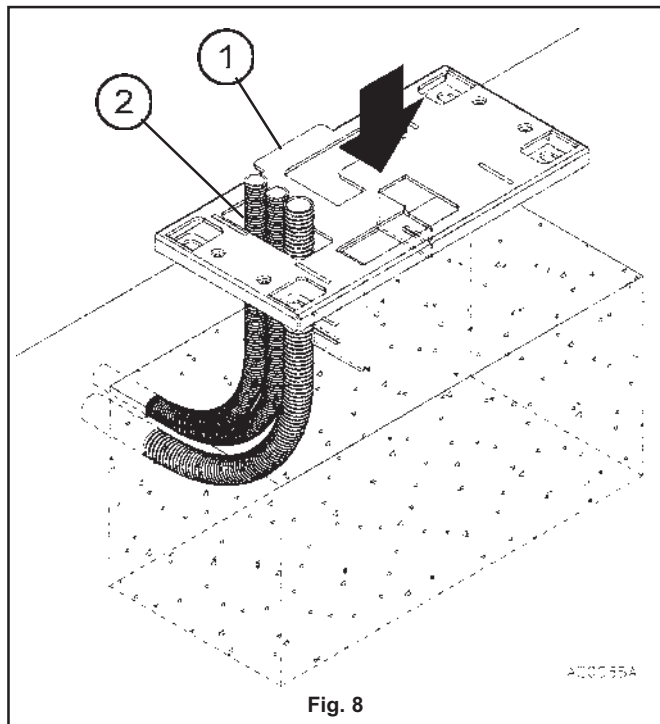


Fig. 8

ATTENTION: the base plate must not be completely immersed in the concrete, but only up to the bottom edges; the sides must remain outside (fig. 9).

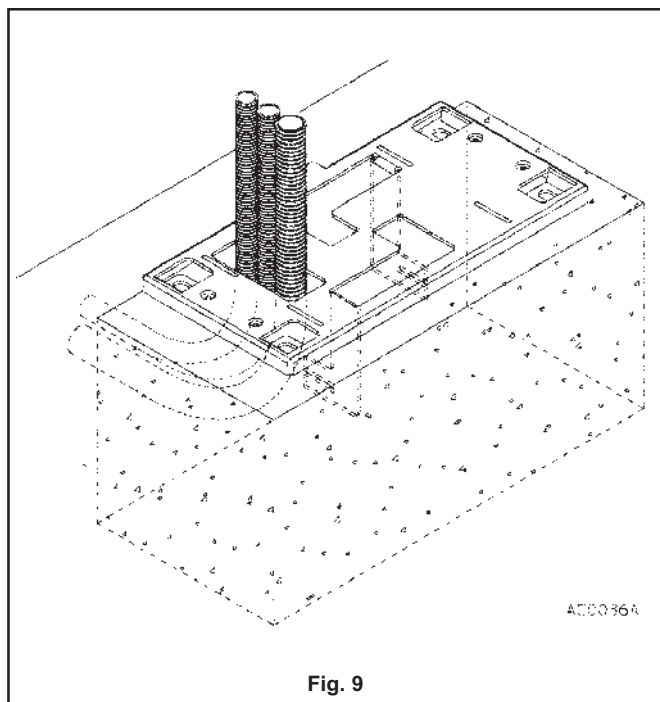
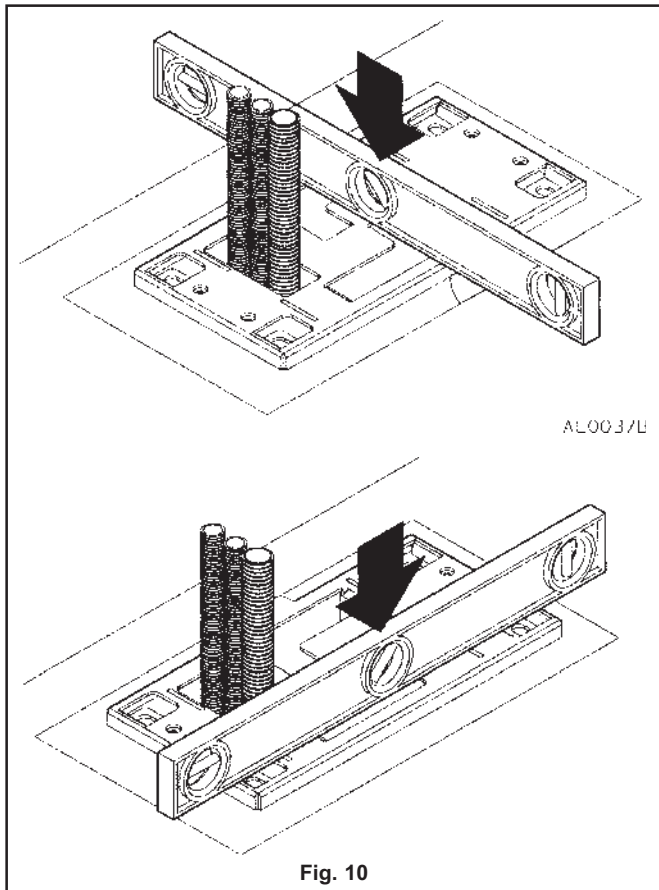
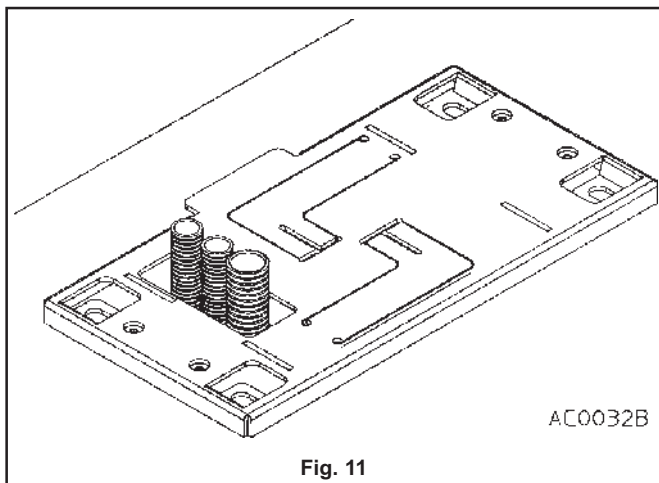


Fig. 9

- h) Position the base plate flat using a spirit level in both directions (fig. 10).

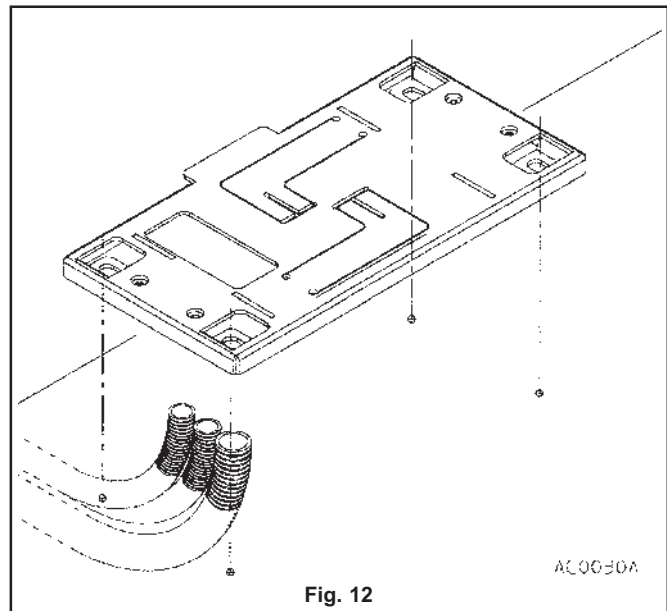


- i) After 2/3 days, when the concrete has solidified, proceed with the installation procedure by cutting the electric cable tubes 15-20mm above the base plate (fig. 11).

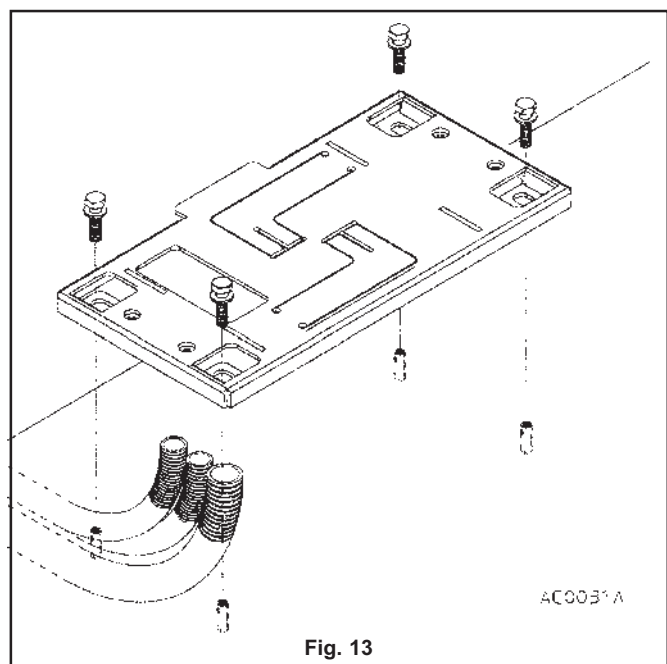


If the place in which the operator is to be installed already has a foundation for fixing the base plate, proceed as described below.

- a1) Position the base plate on the concrete base, respecting the measurements shown in figures 4 and 5 and with the tab (1 fig. 8) facing the gate.
 b1) Check that the tubes for the electric cables are positioned correctly in relation to the base plate.
 c1) Mark the centre of the holes for the clamping screws (fig. 12), shift the base plate and make the holes using a drill.



- d1) Insert the screw anchors into the holes, position and fasten the base plate to the concrete base using the four screws with washers as indicated in figure 13.
 e1) Use a spirit level placed in both directions (fig. 10) to ensure that the base plate is mounted flat, and fill in under corners if necessary.



4.3.2 POSITIONING AND INSTALLING THE OPERATOR

- a) Remove the operator lid (1 fig. 14) and the cable gland hatch (2 fig. 14) and slide off the clamping feet covers. (3 fig. 14).

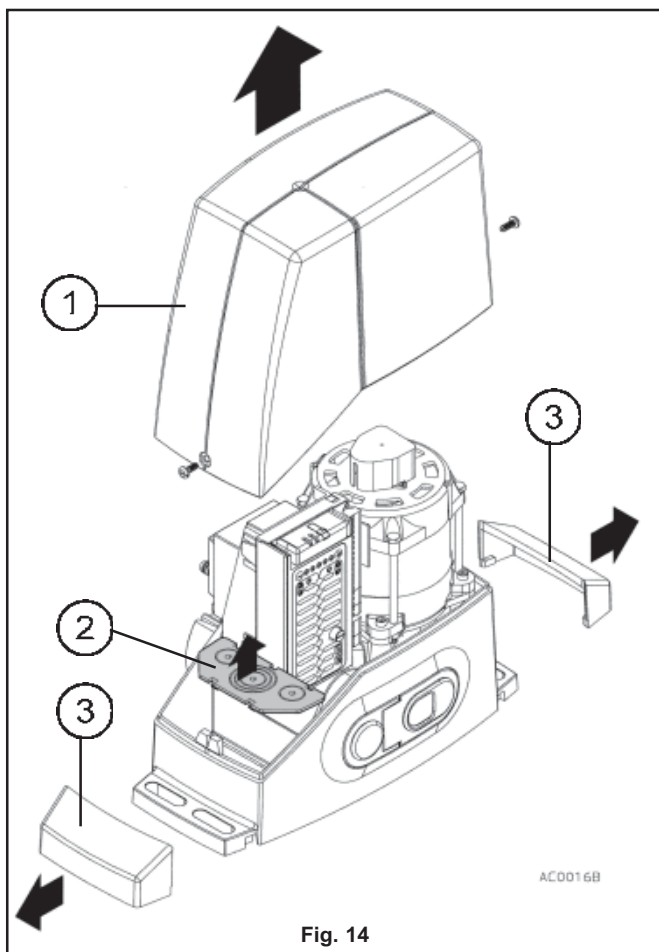


Fig. 14

- b) Unscrew the 4 dowels (fig. 15) until they protrude from the operator's rest plane by about 5mm.

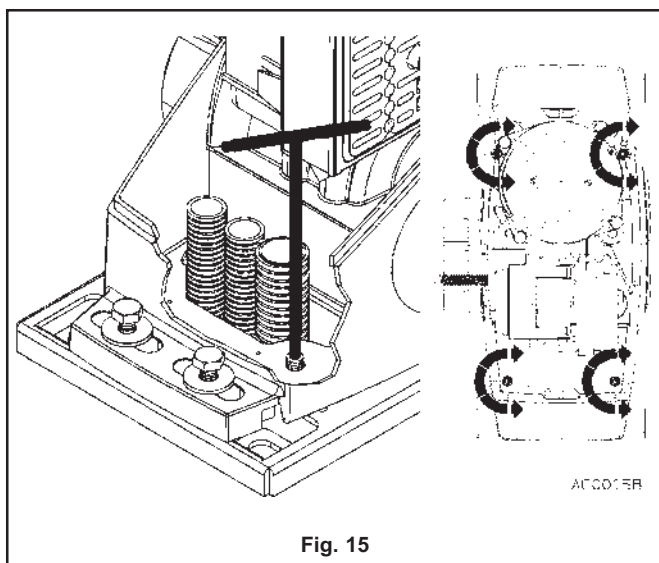


Fig. 15

- c) Rest the operator on the base plate (fig. 16) and manually turn the four M10 screws and respective washers through 3-4 turns (1 fig.16).

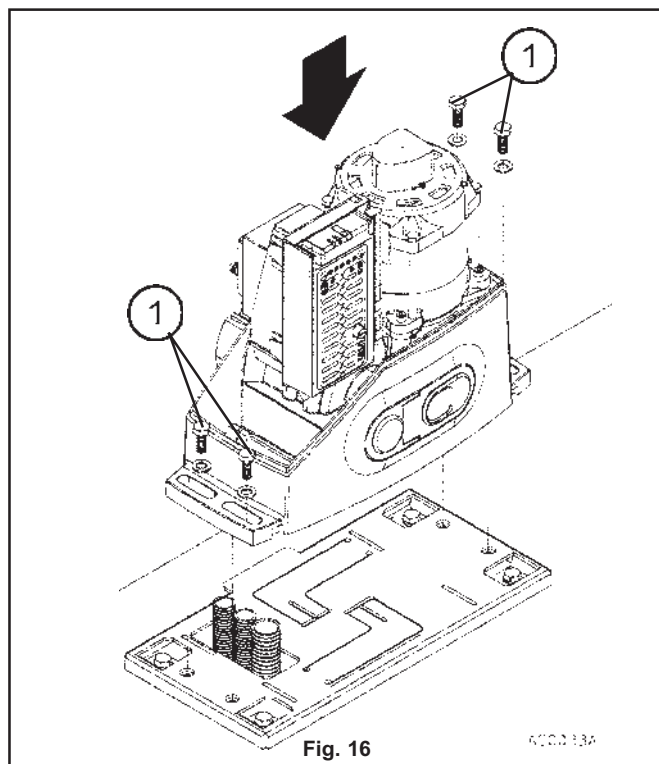


Fig. 16

- d) Make the vertical adjustments using the 4 dowels (fig. 15) and a spirit level.
e) Make the horizontal adjustment and ensure that the operator is perfectly parallel to the gate, by shifting it sideways as indicated in fig. 17.

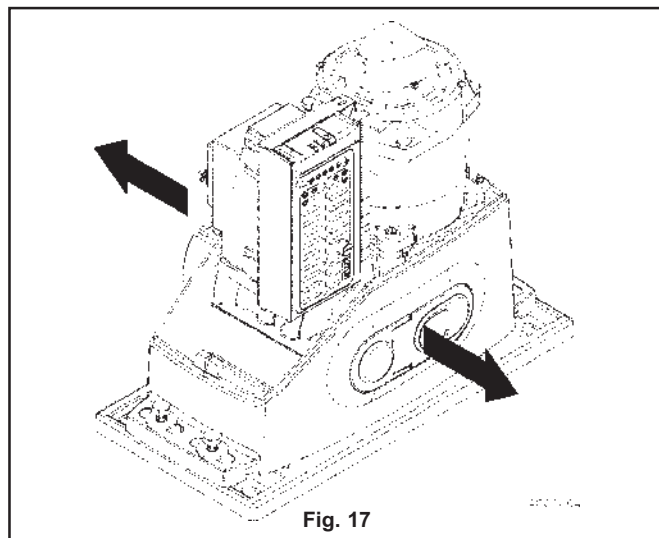


Fig. 17

- f) Once the operator has been positioned correctly, fix it in place by tightening the four M10 screws using a socket wrench or spanner (fig. 18). Replace the clamping feet covers.

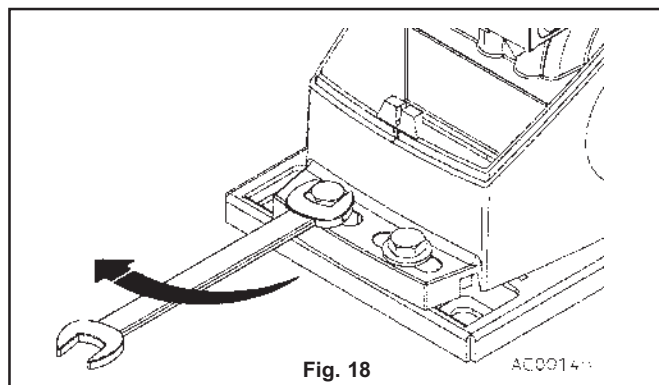


Fig. 18

4.3.3 MOUNTING THE RACK

- a) Release the operator using the release key (see the RELEASING THE OPERATOR chap.).
- b) Completely open the gate and rest the first piece of rack on the pinion.
- c) The rack must protrude from the pinion axis by a sufficient space for the installation of the "gate open" limit switch bracket (1 fig. 19).
- d) Mark the clamping holes on the gate through the holes in the rack, when they are in axis with the pinion. Move the gate manually and repeat the operation for each rack hole.

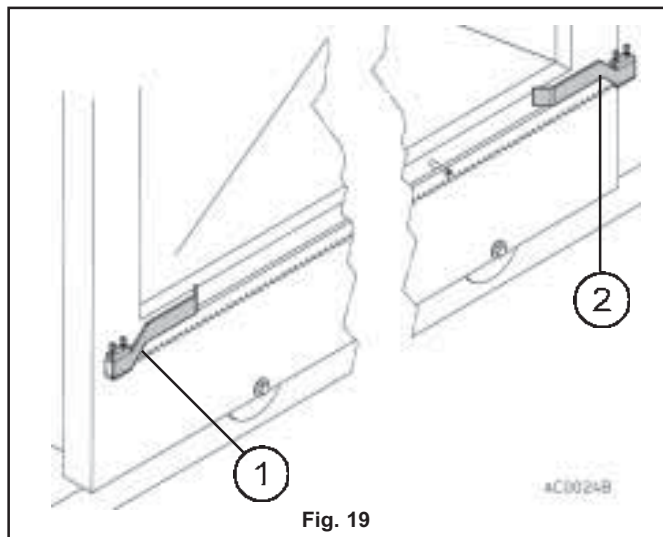


Fig. 19

- e) Ensure that there is a gap of about 1mm between the pinion and the rack (fig. 20) in order to avoid forcing the pinion and therefore also the operator.

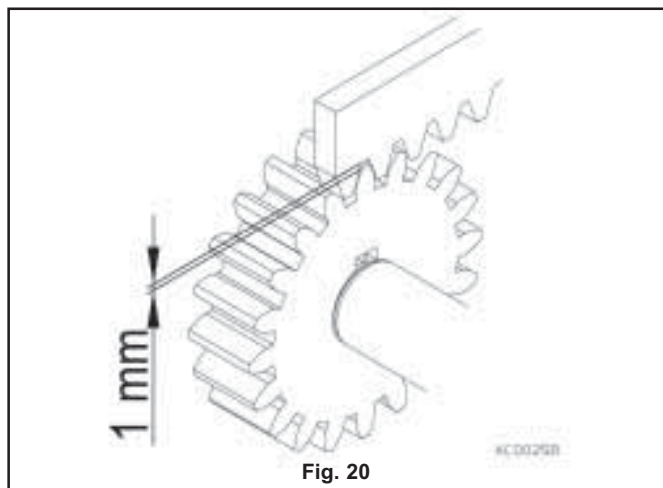


Fig. 20

- f) Assemble the various rack pieces and observe the 1mm gap on the pinion. Once the last rack piece has been assembled and the whole thing has been fastened, use a hacksaw to cut off the protruding part of the rack, leaving adequate space to mount the "gate closed" limit switch bracket (2 fig. 19).
- g) Check that the rack is level (fig. 21).

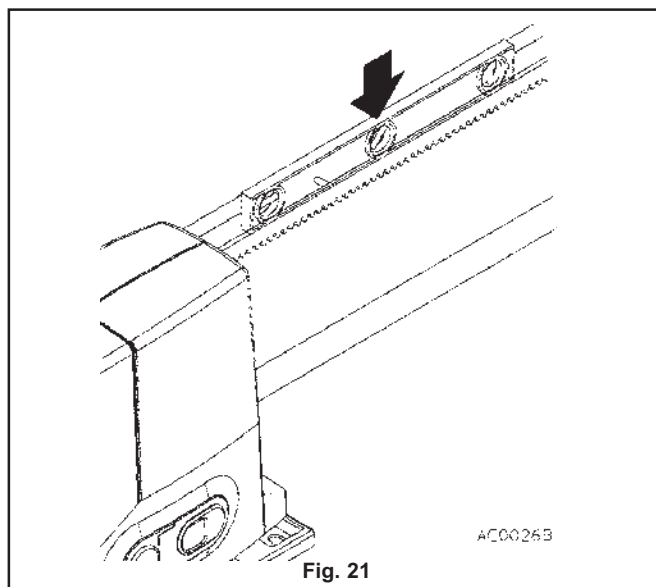


Fig. 21

- h) Manually open and close the gate several times and check that the rack runs parallel to the pinion: **the maximum admissible misalignment is 5mm.**
- i) If the distance between rack and pinion is not respected (gap of approximately 1mm, fig. 20), loosen the M10 clamping screws by 2/3 turns (fig. 18) and unscrew the dowels (fig. 15) until the correct distance is obtained. If necessary adjust the centring of the pinion in relation to the rack axis: move the operator towards or away from the gate making it run on the base plate (fig. 17).
- j) Once the exact position has been identified, retighten the four M10 screws (fig. 18).
- k) Mount the "gate open" (1 fig. 19) and "gate closed" (2 fig. 19) limit switch brackets at the end of the rack, fastening them in place using the screws supplied in the pack. Make allowance for the fact that gate will travel 2- 3 cm after the intervention of the limit switch, then adjust the position of the brackets so that the gate will not collide with the mechanical stop plates.

If the gate already has a rack, pay careful attention to the following points:

- a1) The base plate must be at least 99mm below the row of teeth and 5mm from the outer edge of the rack, as indicated in fig. 4 and 5, in order to allow correct introduction of the pinion below the rack.
- b1) Check that the rack is absolutely level (fig. 21) and straight.
- c1) Position the operator on the base plate and perform the same adjustments and checks illustrated in the points above.
- d1) In particular, ensure that there is a 1 mm gap between the pinion and the rack (fig. 20) to prevent forcing the pinion and the operator.
- e1) Manually open and close the gate several times and check that the rack runs parallel to the pinion: **the maximum admissible misalignment is 5mm.**
- f1) Make the electrical connections between the various automation devices according to the indications in the CONTROL UNIT CONNECTION chap.

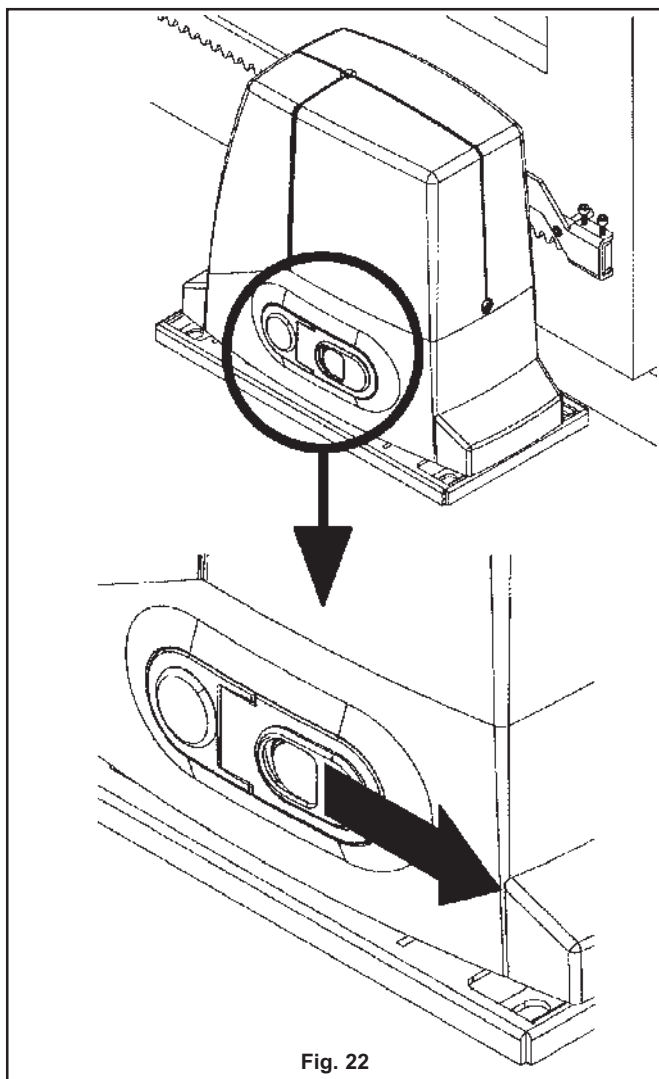


4.3.4 OPERATOR RELEASE

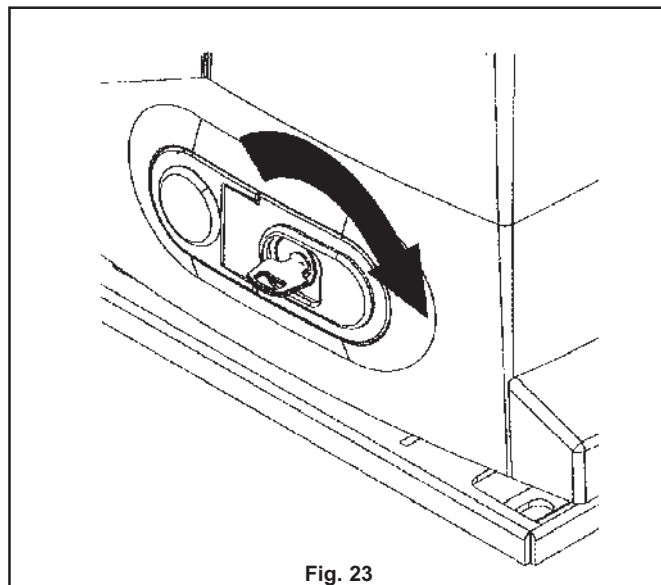
This control is used during blackouts or system failure, to release the operator transmission and allow the gate to be moved manually.

The release key must be kept in a safe place.

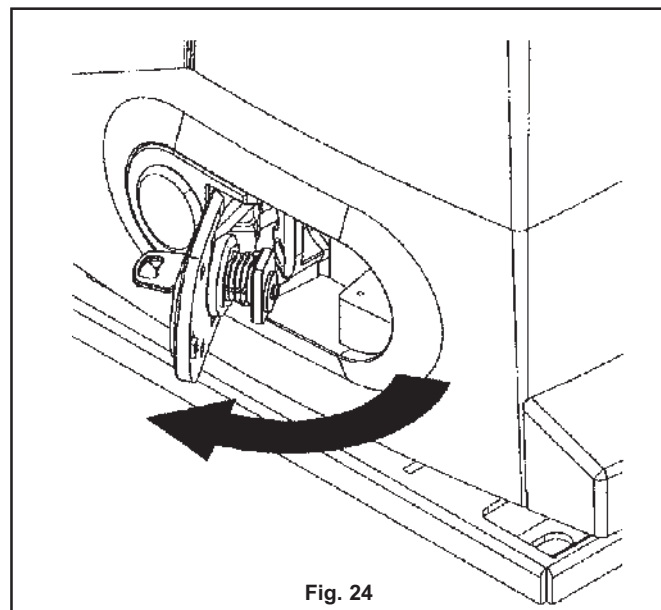
- a) Slide the protective lock cover sideways (fig. 22).



- b) Put the key in the lock (fig. 23) and turn towards the right through 90°; the unhook hatch is now free.



- c) Pull the key slightly outwards to open the hatch and pull the hatch fully open using the fingers (fig. 24); in this way, the hatch, which is fitted with a cam, unhooks the transmission directly by means of a pin.



- d) Now the gate is free and can be manoeuvred manually. A microswitch mounted on the locking device prevents the motor from functioning should the electricity supply be turned back on.
 e) To reattach the transmission act in the opposite direction and move the gate manually until it hooks up.

ATTENTION: in order to prevent breaking the key in the lock, do not apply excessive force.

ATTENTION: activating the manual release may cause uncontrolled movement of the gate due to damage or mechanical unbalance.



5 WIRING AND CONNECTIONS

- Before commencing wiring and connection work, read the **SAFETY INDICATIONS AND WARNINGS** Chapter thoroughly.
- 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"**.

5.1 LIST OF ELECTRIC CABLES

The cables required may vary according to the installation, and type and quantity of devices installed. Figure 25 shows the cables necessary for a typical installation such as that described in the **DESCRIPTION OF THE PRODUCT** chapter (Tab. 1).

The cables used in the installation must comply with IEC standard 60335.

Tab. 3: list of electric cables – fig. 25

Pos.	Connection / Type of cable
1	Electricity supply line 3x1,5 mm ² Cable
2	Flashing light 2x1 mm ² Cable
3	Radio aerial RG58 50Ω type screened cable
4	Tx photo 2x1 mm ² Cable
5	Rx photo 4x1 mm ² Cable
6	Selector 3x1 mm ² Cable

ATTENTION: the cables used must be suited to the type of installation; this choice is the Fitter's responsibility.

- Power supply cables may not be lighter than 60245 IEC 57 (HO5RN-F).
- In the power supply cable one conductor must be yellow-green.
- If it is possible that cables subject to voltage higher than 50 Volt RMS and very low safety cables may come into contact with one another, the cable with voltage higher than 50 volt RMS must be insulated with a sheath; or the very low voltage safety wire must have an insulating sheath at least 1mm thick.
- The fitter must remove the sheath from the supply cable and all cables with voltages exceeding 50 Volt RMS as close as possible to the connection terminals.
- Do not pre-seal the cables that must be fixed with screws to the terminals, if necessary, seal the tip of the uncovered conductors only.
- The power supply cable must have a polychloroprene sheath.
- External connection cables must not be of the flat twin tinsel cord type.
- A fixing device is required for the power supply cable. Mount the power cable in such a way that should it come out of the fixing device the live and neutral wires are released before the earth wire.

5.2 PREPARING THE ELECTRICS AND MAINS CONNECTION

This manual does not describe how the electrics system should be prepared for connection to the mains, however it gives the following warnings:

- **The mains supply line must be installed and connected by a qualified electrician or a professional fitter.**
- **The electricity supply line must have adequate protection against short circuits and must be earthed.**
- **The power supply network must contain a unipolar disconnection device with an opening distance of the contacts equal or greater than 3.5 mm that assures the complete disconnection of the power supply.**

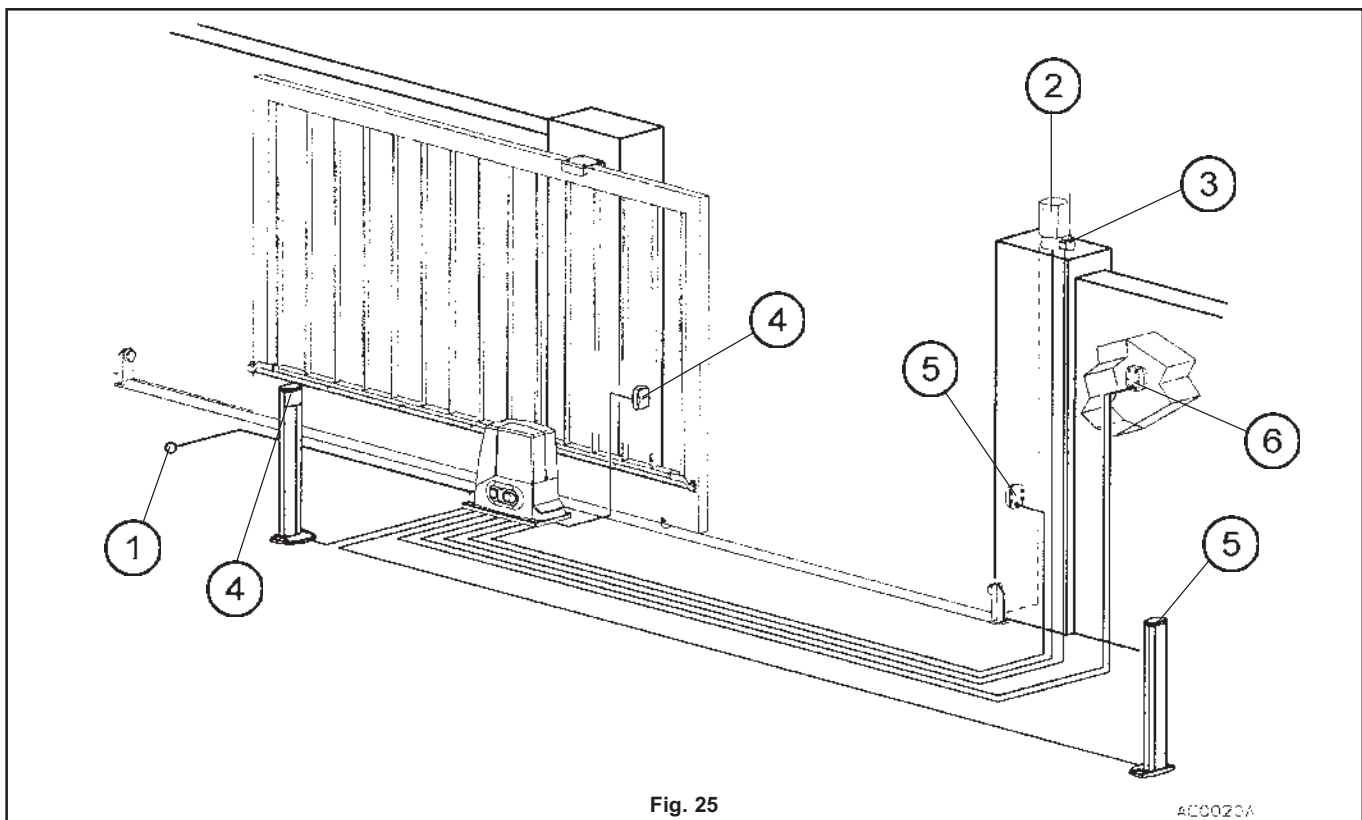


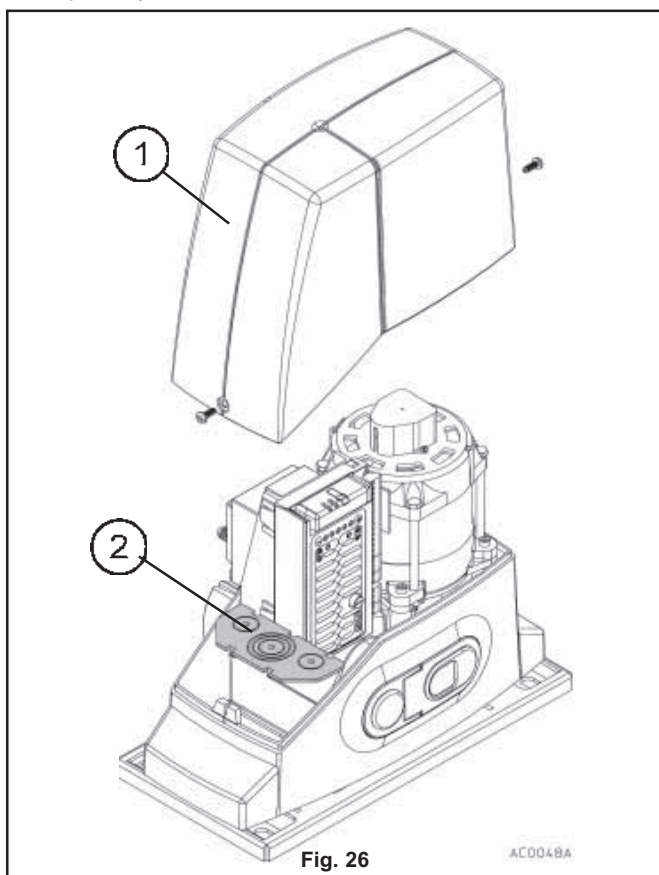
Fig. 25

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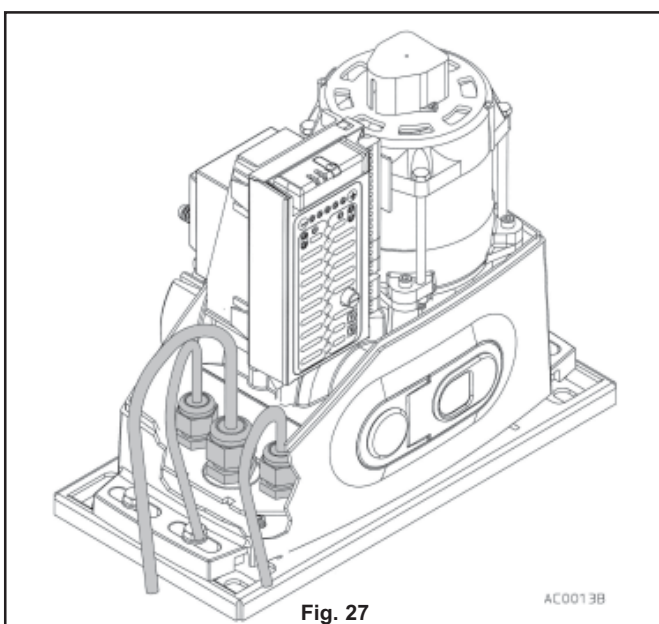


5.3 INTRODUCING THE ELECTRIC CABLES INTO THE OPERATOR

- a) In order to access the control unit remove the operator cover (1 fig. 26) by removing the two lateral clamping screws (operation performed previously in the positioning and installation of the operator).



- b) Open the pre-punched holes in the cable gland hatch (2 fig. 26), introduce cable glands suited to the maintenance of the degree of protection, then thread the cables required to make the connections through the cable glands (keep 230V cables separate from very low voltage cables).
- c) Leave the cables about 40 cm longer (fig. 27).

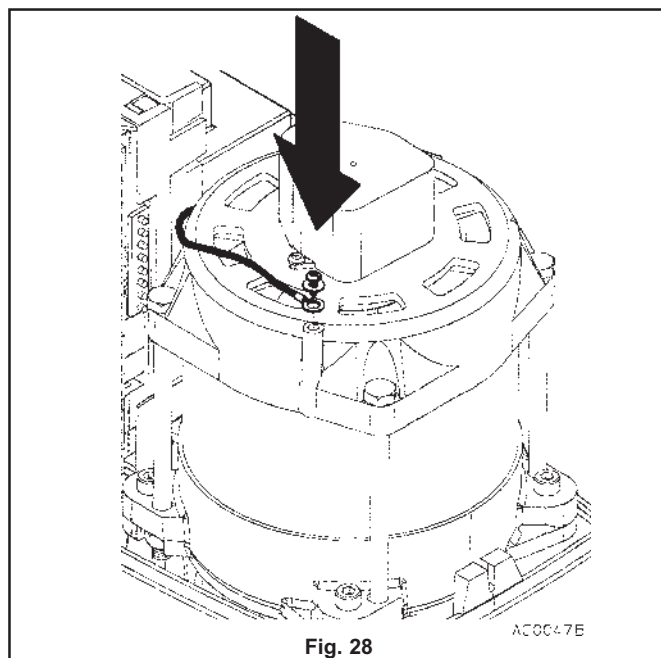


- d) Replace the cable gland hatch, ensuring that it closes properly against the seat in the operator base in order to prevent access to insects and dirt.

5.4 CONTROL UNIT CONNECTION

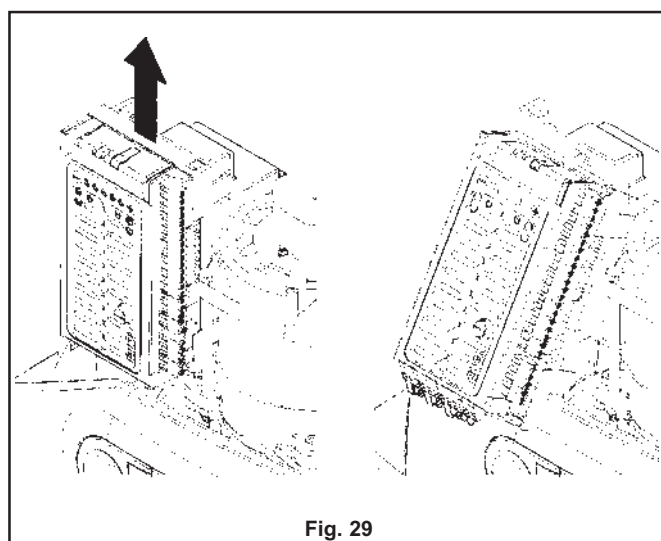
The Fitter must make the connection to a 230 V ac 50 Hz power supply and the connections of the various devices used with the automation. The connections between the control unit, motor, encoder and autotransformer have been performed by the Manufacturer.

ATTENTION: for safety reasons, the motor must be earthed by connecting the end of the yellow-green wire to the upper cap in the point indicated with an earth symbol in fig. 28.



In order to facilitate connections to the control unit and control unit programming, it can be removed from its seat. The operation is straightforward and does not require the use of tools:

- a) Slide the control unit upwards and, if the length of the cables is sufficient, place it on the edge of the operator base (fig. 29) or hold.



- b) Once connections and/or programming work have been completed, replace the control unit on the support simply by applying light pressure to press it into the 4 clips.

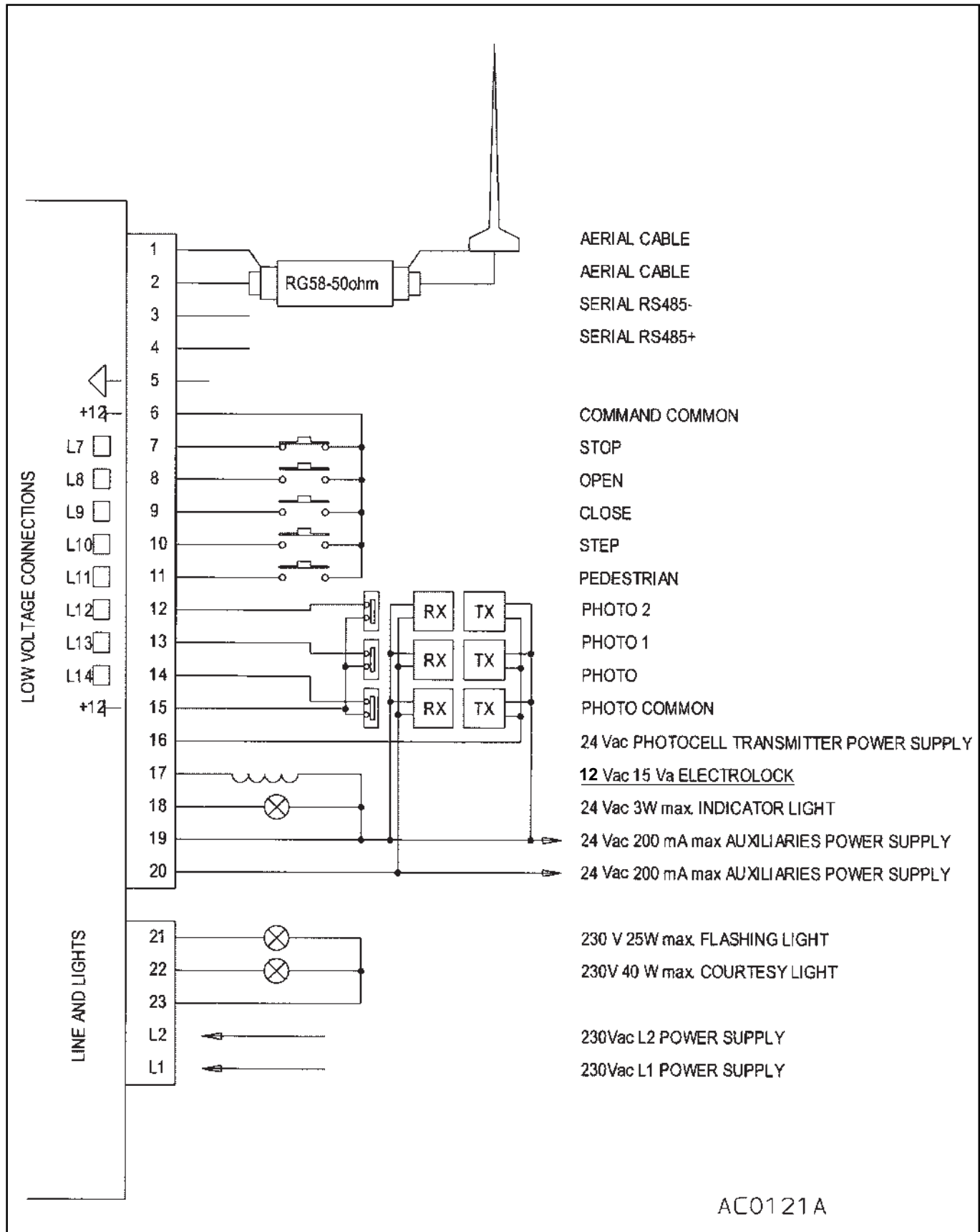


5.4.1 WIRING DIAGRAM OF LINE, LIGHT AND VARIOUS DEVICES (RIGHT HAND PART OF CONTROL UNIT) CONNECTION

5.4.1.1 DESCRIPTION OF LINE AND LIGHT CONNECTIONS (230 VAC POWER SUPPLIES)

Fig. 30 gives a brief overview of the various connections from the control unit to the exterior.

The terminals on the lower right hand part of the control unit (fig. 31) are reserved for the connection of the electricity supply and the various automation devices powered at 230 V ac. These devices are the flashing light and one or more courtesy lights (optional).



- **Power supply:** (terminals L1 and L2) connection to the external 230V ac 50Hz power supply line.
- **Courtesy light:** (Terminals 22 and 23) 230 V power supply output that makes it possible to switch on a courtesy light (40W bulb) at the start of each movement, characterised by an adjustable time interval.
- **Flashing light:** (terminals 21 and 23) 230V power supply output for SPLENDOUR flashing lamp (25W light bulb), characterised by three flashing modes:
 - 1) slow for the gate opening phase;
 - 2) fast (flashing time halved), for the closure phase;
 - 3) particular flashing characterised by three flashes and a pause to indicate a malfunction or slowed conditions at the start of the travel.

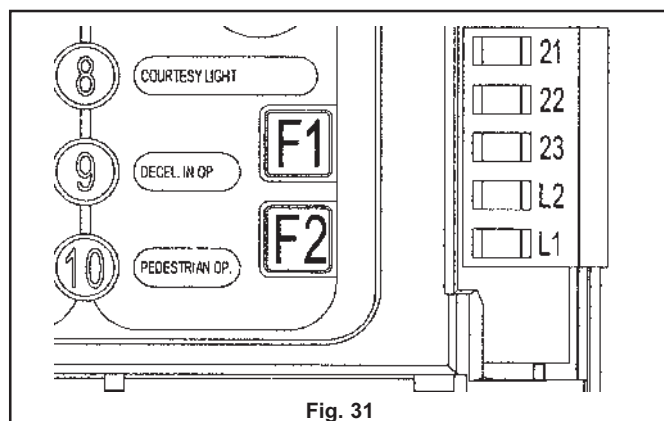


Fig. 31

Tab. 4: 230 Vac power supply terminal board– fig. 31

Terminals	Function / Description
L1	230 Vac power supply 230 Vac 50 Hz. Power supply line
L2	230 Vac power supply 230 Vac 50 Hz. Power supply line
22 - 23	Courtesy light 230 Vac 50 Hz courtesy light 40W max. output
21 - 23	Flashing light 230 Vac 50 Hz flashing light 25 W max. output

5.4.1.2 DESCRIPTION OF THE CONNECTION OF THE DEVICES

The terminals (numbered from 1 to 20) on the terminal board (fig. 32) are used to connect the automation's various devices.

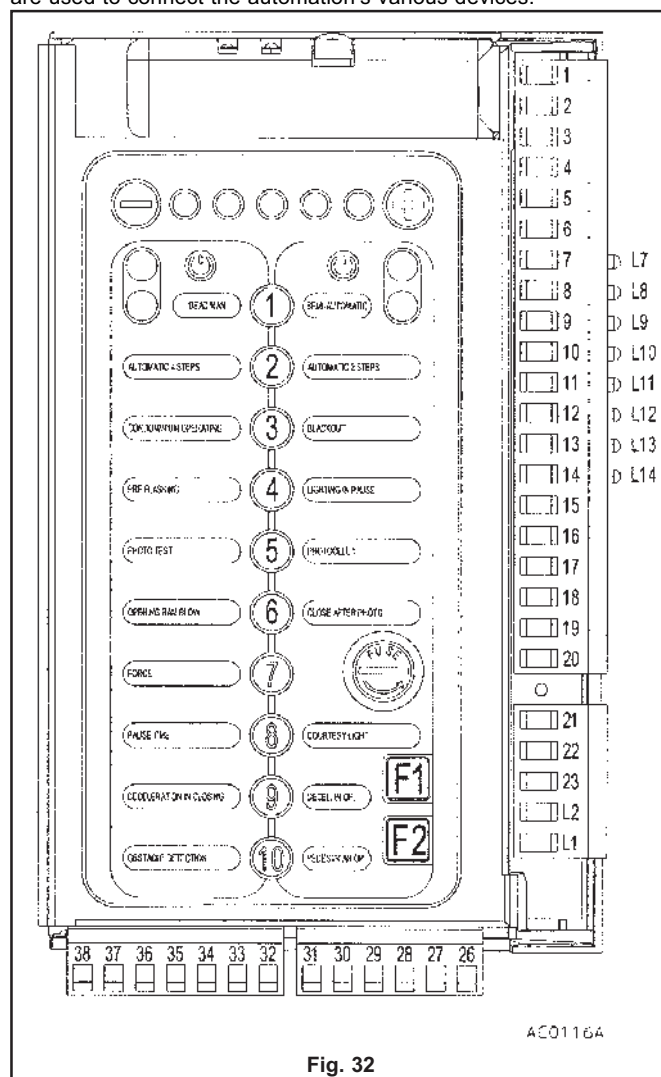


Fig. 32

- Indicator light** (terminals 18 and 19) on the card it is possible to connect an indicator light that repeats the same function as the flashing light
- Electro-lock** (terminals 17 – 19) is an electric lock release command that is activated at the start of the gate opening movement for an interval that varies according to the opening ram blow advanced adjustment.
- Photo** (terminals 14 – 15) this is a normally closed input, where the external photocell (or group of photocells) is connected. It does not intervene during the opening phase; in the closure phase it causes the inversion of the gate's direction of movement to opening.
- Photo 1** (terminals 13 – 15) this is a normally closed input, where the internal photocell (or group of photocells) is connected. It is characterised by two selectable function modes (see Photo 1 chapter). As a default, it does not intervene during opening and during the closure phase it causes the inversion of the gate direction to opening. When used in the alternative mode, the gate stops if the photocell beam is interrupted during both opening and closure; the gate continues to open when the photocell disengages.



Photo 2	(segregation spaces – terminals 12 – 15) this is a normally closed input, where the photocell is connected for protection from the “risk of segregation”. It intervenes during opening with slow, partial inversion (3 seconds).
Pedestrian	(terminals 6 – 11) this is a normally open input and causes the partial opening of the gate to allow access to pedestrians only. See the PEDESTRIAN chapter for information on adjusting.
Step	(terminals 6 – 10) this is a normally open input and serves to activate gate movement. There are two setting modes: 2- or 4-step (see the AUTOMATIC MODE chapter). In the former case, the signal causes the inversion of movement (open – close and vice versa); in the latter case, it performs the following sequence in rotation : open – stop – close – stop; according to the situation in which the gate is, the step command coincides with the subsequent one of the series.
Open and close	(terminals 6 - 8 and 6 – 9) are two normally open inputs, the closure of which causes the gate's opening and closure motion.
Stop	(terminals 6 - 7) this is a normally closed input and prevents the movement of the gate when immobile and causes the immediate stoppage when in movement. It can be connected with safety devices such as an emergency stop button or sensitive strip. It must be bridged if no device is to be used.

5.4.1.3 CONNECTING PHOTOCELLS

N.B. (for all photocells):

- Photocells must be installed progressively, therefore there are three possible applications: photo, photo and photo 1, photo, photo 1 and photo 2. .
- Always bridge the contacts of photocells not present in order to allow the system to function properly, in particular, if the use of photo 1 and photo 2 is not envisaged it is necessary to bridge the following terminals with a cable:
 - Photo 2 is not present: bridge terminals 12 and 15 together.
 - Photo 1 and photo 2 are not present: bridge together terminals 12 – 15 and 13 – 15.

ATTENTION: set the phototest function correctly, if active, as indicated in the PHOTOTEST chapter; otherwise the control unit will read it as a fault.

Tab. 5: various device terminal board – fig. 32 and 34

Terminals	Led	Function	Description
19-20		24 Vac Power supply	24Vac, 200mA max services power supply (e.g. photocell receivers).
18-19		Indicator light	24Vac out put for the connection of an indicator light, max 3W.
17-19		Electro lock	24 Vac output for the connection of the 15Va electrolock.
16-19		Transmitter photocell power supply	24 Vac output for the power supply of the photocell transmitters. Separate from the auxiliaries power supply in order to allow the phototest to be performed. The receivers are powered by terminals 19-20 (24Vac).
15		Common photocells (not to be used for other purposes)	Common for photocell signal, with 12 Vdc voltage.
14	L14	Photo	N.C.(normally closed) input for the photocell signal (receiver).
13	L13	Photo1	NC input for the photocell signal (receiver).
12	L12	Photo2	NC input for the photocell 2 signal (receiver).
11	L11	Pedestrian	NO (normally open) input for pedestrian command.
10	L10	Step	NO input for the step command.
9	L9	Close	NO input for the close command.
8	L8	Open	NO input for the open command.
7	L7	Stop	NO input for the stop command.
6		Common commands (not to be used for other purposes)	Common for the pedestrian, step, close, open and stop commando, with 12 Vdc voltage.
5		Terminal not to be used	(common 0 volt of the electronics at 12 Vdc).
4		Serial	RS485 + cable.
3			RS485 - cable.
2		Input for radio receiver aerial.	Aerial cable.
1			Aerial sheath (screen).

ATTENTION: NC inputs (Stop, Photo, Photo 1 and Photo 2) where no devices are connected must be bridged.



Typical layout of photocell installation fig. 33.

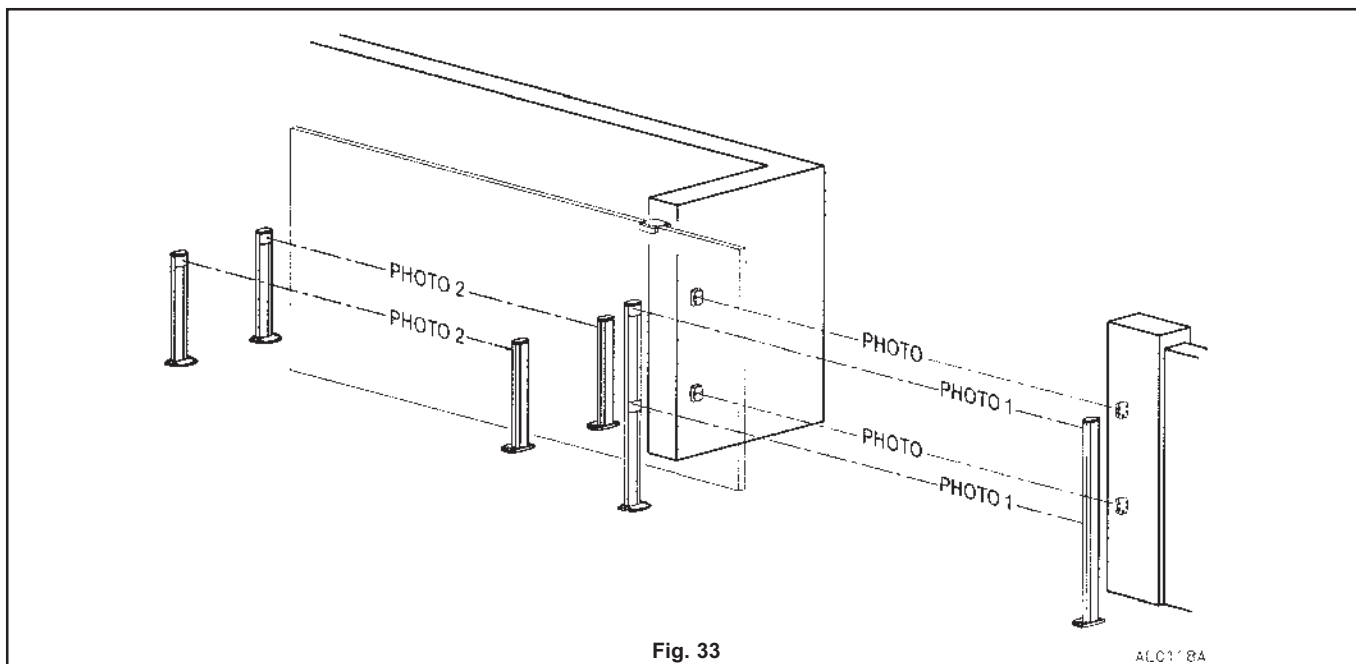


Fig. 33

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5.4.1.4 INDICATOR LIGHTS

A row of 8 leds (fig. 34) is present on the right hand side of the board, beneath the terminals.

Leds L7...L14 (fig. 34) are lit when the corresponding signal is present, therefore normally closed commands will normally be lit and vice versa. These leds therefore indicate a malfunction of the devices connected.

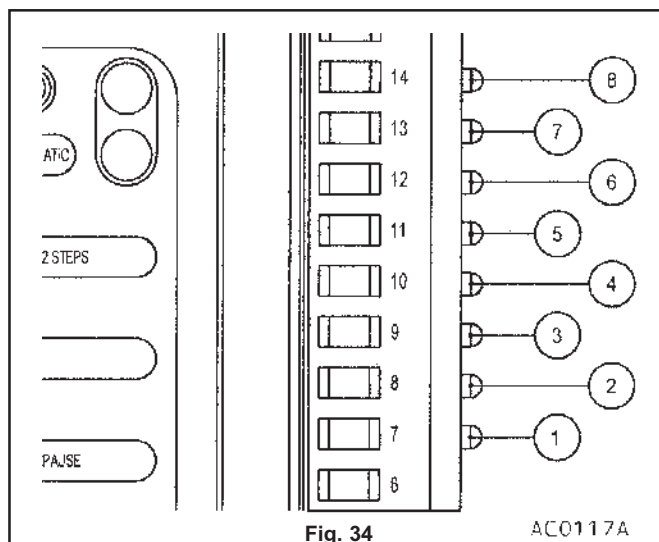


Fig. 34

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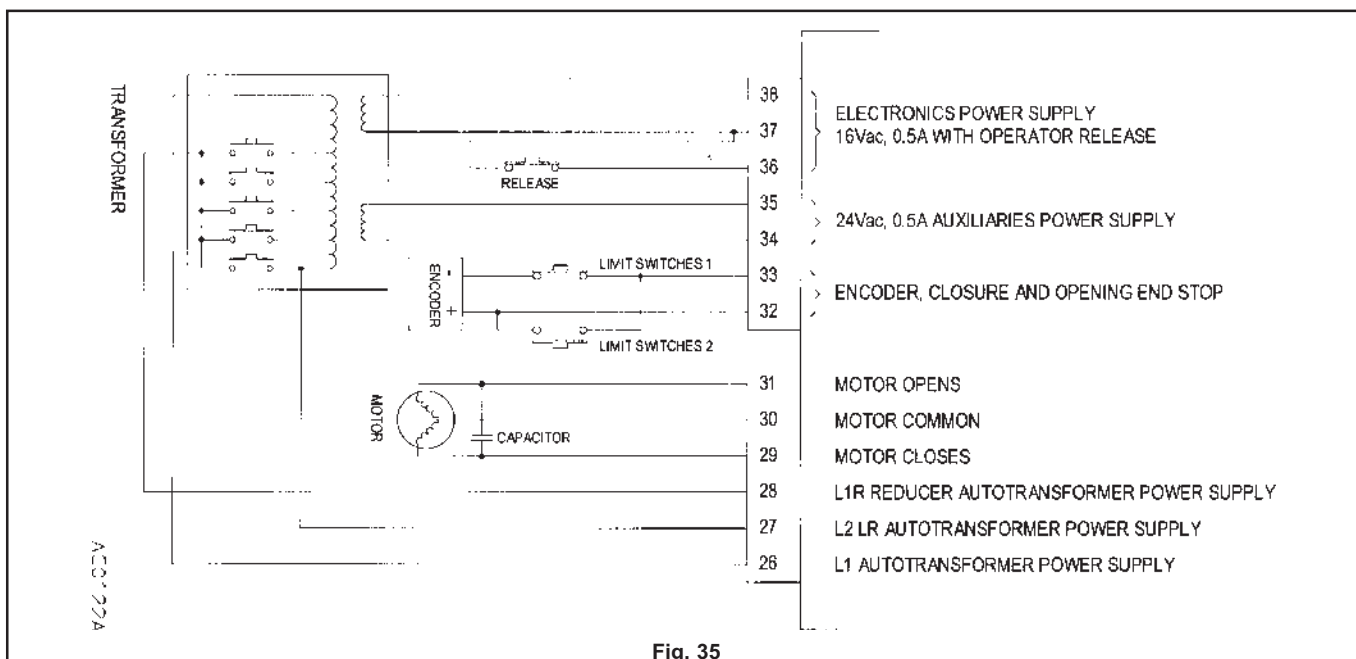


Fig. 35

AC0117A



5.4.2 WIRING DIAGRAM FOR THE CONNECTIONS ON THE LOWER PART OF THE CONTROL UNIT

5.4.2.1 DESCRIPTION OF THE CONNECTIONS ON THE LOWER PART OF THE CONTROL UNIT

ATTENTION: the connections of the lower part of the control unit (fig. 35) and the various devices connected are already wired by the Manufacturer and may not be altered under any circumstances. An approximate description is given below.

5.4.3 MOUNTING THE RADIO RECEIVER

The radio receiver is supplied separately from the control unit and must therefore be mounted in the relevant seat by removing the hatch (1 fig. 36) that gives access to the connectors and is positioned on the upper part of the control unit.

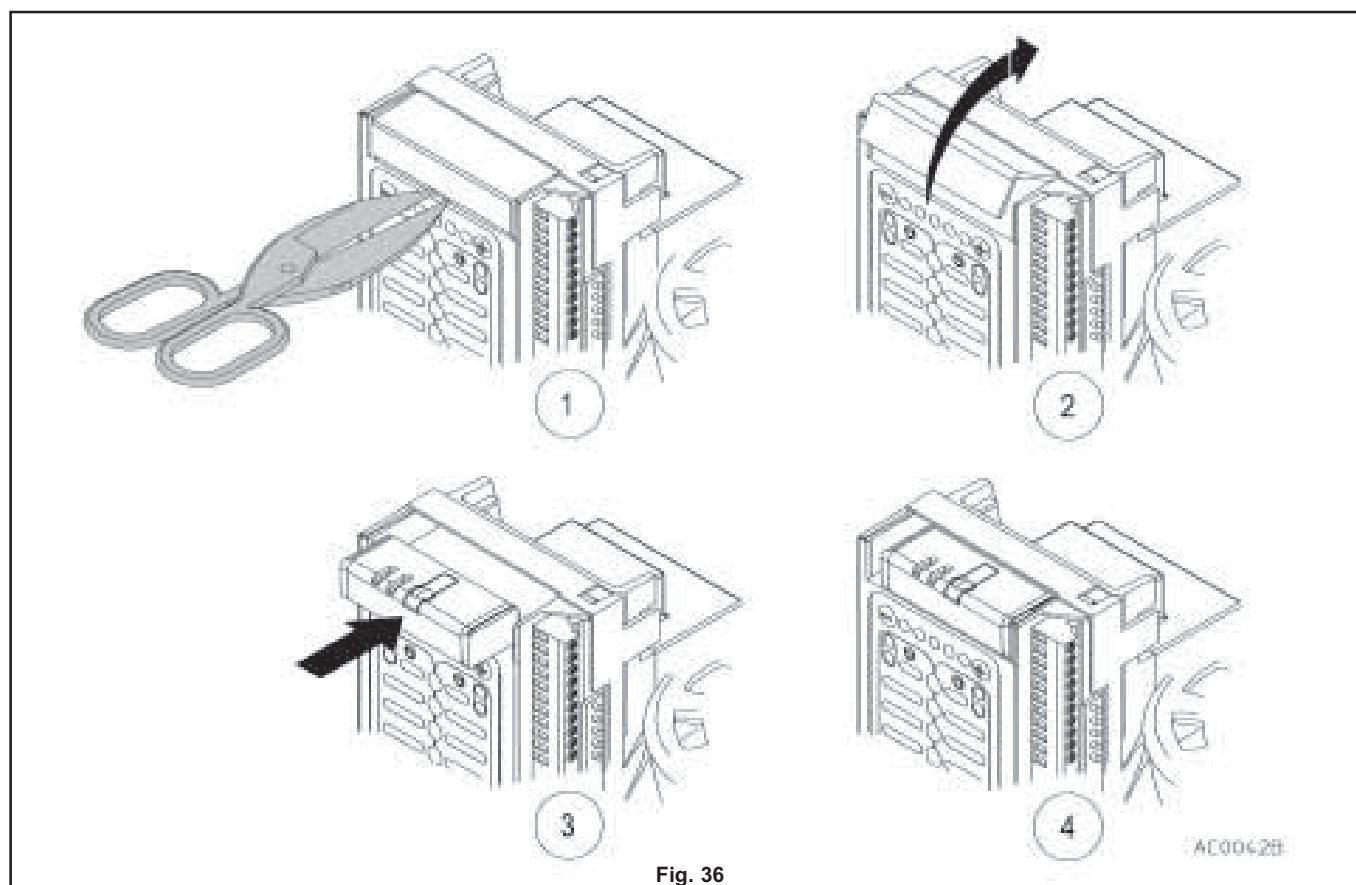
- a) Using scissors or a cutter, cut the three sectors that hold the hatch in place (2 fig. 36)
- b) Fold the hatch back (3 fig. 36) until it comes away from the control unit.
- a) Insert the radio receiver (4 fig. 36), paying attention not to fold the feet.

Tab. 6: right hand terminal board – fig. 35

Terminals	Function	Description
31 - 30 - 29	Motor power supply	230 Vac 50 Hz output
28 -27 - 26	Autotransformer supply	L1R, L2, L1, 230 Vac 50 Hz output
31 - 29	Capacitor	Capacitor

Tab. 7: left hand terminal board – fig. 35

Terminals	Function	Description
38-37	16Vac electronics power supply input, including the operator's manual release signal.	Electronics power supply: 16 Vac 0.5 A input.
37-36		Operator release switch input.
35-34	24 Vac services power supply input.	Services' power supply: 24 Vac 0.5 A input.
33	Closure and opening limit switch signal input.	Negative encoder signal and limit switch 1 signal input.
32		Positive encoder signal and limit switch 2 signal input.



6 STARTING UP AND INITIAL CHECKS

6.1 DESCRIPTION OF THE KEYBOARD

The keyboard (fig. 37) on the control unit makes it possible to set all the functions necessary for a safe and controlled functioning of the automation.

- It is constituted by a membrane keyboard that a central column of keys (1 to 10) divides into two vertical zones: the right keyboard (blue) and the left keyboard (yellow). Each vertical keyboard manages and memorises certain function parameters.
- The selection of the left or right keyboard is made by pressing one of the two buttons bearing the switch symbol: the button (A fig. 37) enables the <LEFT KEYBOARD>, and button (B fig. 37) selects the <RIGHT KEYBOARD>.
- The keyboard is deselected automatically after a certain interval of inactivity.
- When the keyboard is selected, the red (8 and 9 fig. 37) and green (6 and 7 fig. 37) leds flash alternating with one another, it is possible to set the corresponding parameters with the keys 1 to 10.
- The <-> (in the top left hand portion) and the <+> (top right hand portion) buttons are used to vary the values or parameters.
- The row of horizontal red leds (from 1 to 5 fig. 37) indicates the value set for a given parameter: the more leds that are lit, the higher the parameter. They can also be used as a status signal for certain parameters.
- The lateral red leds (8 and 9 fig. 37) indicate a state of parameters not set if they flash, whereas they indicate the reading of the limit switch signal (right or left) when they are on (fixed red light).
- The lateral green leds (6 and 7 fig. 37) indicate a parameters set status or correct functioning according to the keyboard selected.

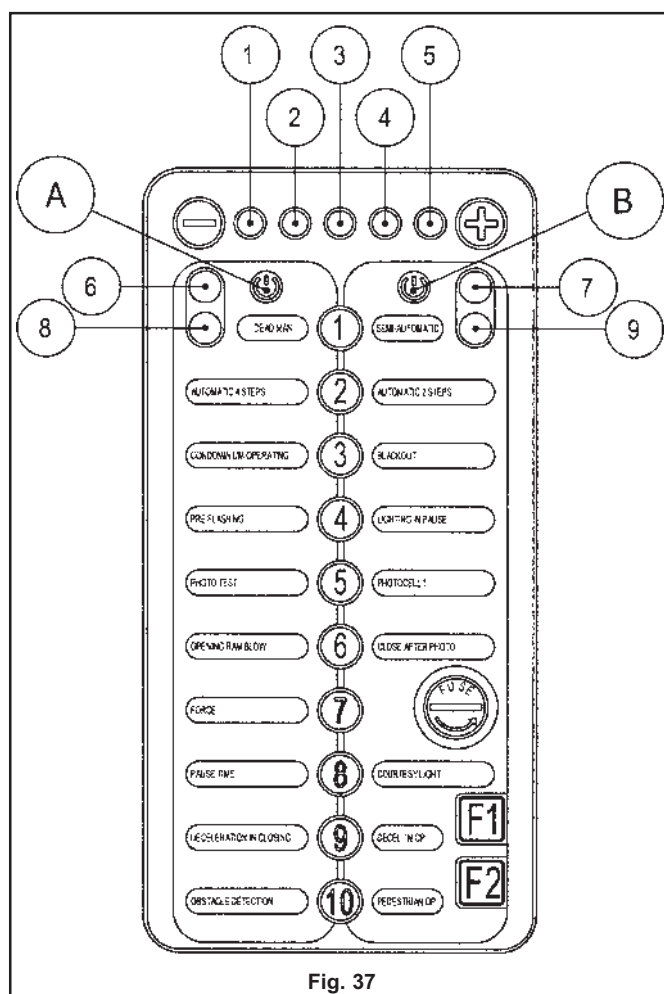


Fig. 37

6.2 INITIALISATION

ATTENTION: LIFE cards are multipurpose and may be used for several applications; therefore, on activation they require the identification of the type of automation that they will serve, in this case a sliding gate.

This is a vitally important operation and one that must be performed by the fitter, with particular ATTENTION.

- Position the gate so that it is distant from both limit switch (e.g. half open).
- Hold the electromechanical release hatch well open as indicated in fig. 24.
- Switch on the power to the system.
- Press and hold down the – (minus) key and key 7 simultaneously, and close the release hatch so as to allow power supply to the control unit.**
- When led 1 in fig. 37 switches on the identification process has been successful and the keys can be released.
- This operation installs in the card the default setting for the sliding gate described in tab. 9 column 1.
- Check that the operator is gripped by attempting to move the gate manually.
- Check that the 2 red <OFF> leds (8 and 9 fig. 37) flash and that 4 of the 8 side leds have a fixed light (fig. 34):
 - L14 of PHOTO
 - L13 of PHOTO 1
 - L12 of PHOTO 2
 - L7 of STOP
- the other leds must be switched off.

If this does not happen, check the connections and the efficiency of the various devices; ensure that the NC inputs where no devices are connected are bridged.

It is now possible to perform the identification of the radio controls as described in the RADIO CONTROL IDENTIFICATION chapter, in order to facilitate the control operations during installation.

6.3 INITIAL ADJUSTMENTS AND PROGRAMMING

The operations performed by the automation and the gate during travel reading are the exclusive responsibility of the fitter.

6.3.1 IDENTIFYING THE DIRECTION OF MOTION

- Give the closure command; if the direction of the gate is correct, keep the command active.
- If the direction assumed causes the gate to open, release the command and reactivate it: the gate will invert movement by closing.
- Should the gate not move, the value of the force on the autotransformer slider must be increased (see FORCE FUNCTION chapter)
- As soon as the closure limit switch is reached (gate completely closed) release the command; one of the two red <OFF> leds (8 and 9 fig. 37) signals the reaching of the closure limit switch and adopts fixed light conditions.

6.3.2 IDENTIFYING THE TRAVEL

Give the opening command and keep enabled (persistent command) until the opening limit switch is intercepted; this travel is performed slowly.



6.3.3 IDENTIFYING THE SPEED (OBSTACLE DETECTION SETTINGS)

- Give the closure command (persistent command): the run takes place at normal speed.
- Perform the FORCE FUNCTION adjustments (See Chap??) according to the desired movement characteristics and the force values envisaged by EN standard 12445 as indicated in the MEASURING AND ADJUSTING THE FORCE chapter
- Perform in dead man conditions (persistent control) a number of travels in order to check that the gate works properly. The last travel will determine the identification of the speed and it is therefore fundamental that it is carried out linearly without irregularity.
- Ensure that green leds 6 and 7 (fig. 37) flash to indicate that a speed value has been stored.
- Set the system in an automatic mode and perform adjustments and advanced settings (see AUTOMATIC MODE chapter), according to function requirements.

6.3.4 MEASURING AND ADJUSTING FORCE

The fitter must perform the measurement of the gate's impact force. For this purpose refer to EN standard 12445, which specifies the equipment to be used in order to measure the opening and closure forces (p.5.1) and the points in which the forces must be measured and the direction of measurement (p. 5.2).

If the values read exceed the maximum admitted values, the operator's voltage must be adjusted.

- The adjustment of the voltage of the motor power supply is performed directly on the autotransformer by means of the slider switch with which it is equipped (1 fig. 38).
- Move it towards the lower values on the scale to reduce the torque, move it towards higher values to increase the torque.
- It is possible to intervene further on the adjustment of the force for the stretches performed at a slower speed by acting on electronic adjustment as described in the FORCE FUNCTION chapter.

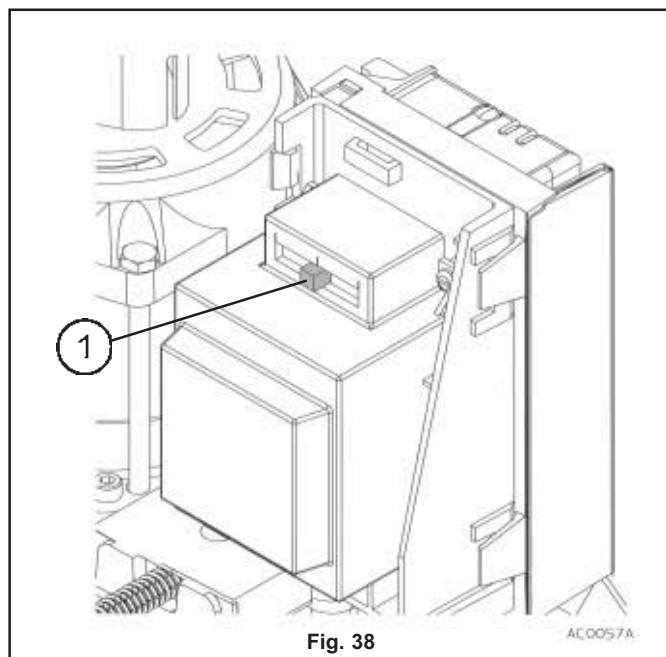


Fig. 38

ATTENTION: when the force is altered, the SPEED IDENTIFICATION procedure must be repeated.

6.4 RADIO CONTROL IDENTIFICATION

6.4.1 RADIO RECEIVER MEMORY MODES

The receiver has two radio channels, which are set as follows:

- Channel 1 is assigned to the PEDESTRIAN command.
- Channel 2 is assigned to the STEP command.

The receiver (fig. 39) is characterised by a key (T) and two leds (A and B).

- By pressing the T key once, the first led (A) will light and channel 1 will become available.
- By pressing the T key a second time the second led (B) will light and Channel 2 will become available.
- By pressing the key T a third time one exits the identification procedure.

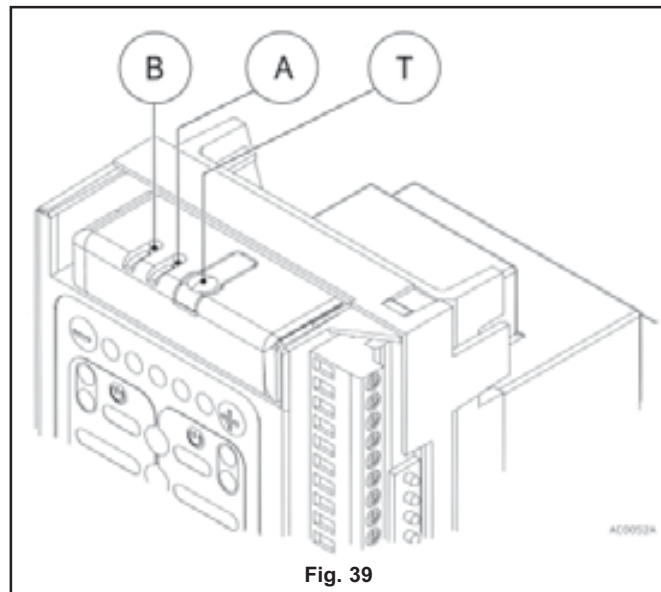


Fig. 39

6.4.2 RADIO CONTROL SETTINGS

It is necessary to establish which key of the radio control to assign to channel 1 and which to channel 2.

- To enable a radio control key on channel 1 (PEDESTRIAN), one must act while the led A (fig. 39) is lit; to indicate that it is in enabling phase led A switches off and then on again.
- Perform the same actions for Channel 2 (STEP)
- To enable more than one radio control on the same receiver channel, select the desired channel (led A or led B lit) and press the desired key on the various radio controls.

6.4.3 TOTAL ERASURE OF THE RADIO RECEIVER MEMORY

- Press and hold down the key T (fig. 39).
- Leds A and B will light.
- Release the key and within two seconds press and release it again: the two leds will flash for a few seconds to indicate that the memory is being reset.
- Now all previous radio control settings are erased, the receiver is ready to be enabled again.

6.4.4 SETTING CHECKS

Checking the radio control settings is simple: press the enabled key, check whether the red led corresponding to the command flashes and that the automation performs the desired action (this check should not be performed the first time the control unit is enabled).



7 TESTING AND TRIAL RUN

- **The testing and trial run must be performed by a COMPETENT PERSON supervised and aided by a PROFESSIONAL FITTER. It is the tester's responsibility to perform the checks required in accordance with the risks existing and to check conformity with the relevant legislation, in particular with EN standard 12445, which governs the methods for performing trials on gate automations and EN standard 12453 that specifies the performance requisites concerning safety of use.**
- The testing and trial run are the most essential phases of installation for guaranteeing maximum operating safety.
- The checks and procedures for testing may also be used for routine checks on the automation and its devices.
- The automation may only be tested if a non-hazardous force tolerance has been set (see the MEASURING AND ADJUSTING THE FORCE chapter).
- Adjust the maximum force in line with EN standard 12445.
- 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.
- 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.
- Always remember that the following residual risks exist when the gate is in movement:
 - a) impact and crushing against the main closure edge;
 - b) impact and crushing in the opening area;
 - c) shearing between the sliding leaf and the fixed guides and support during movement;
 - d) mechanical risks caused by movement.

7.1 TESTING

During testing, ensure that the measurement of the gate's impact force has been performed in accordance with EN standards 12445 and 12453.

- **Check that the indications given in the SAFETY INSTRUCTIONS AND WARNINGS chapter have been carefully observed.**
- **Ensure that the automation is correctly adjusted and that the protection and release systems are in good working order.**
- Using the key selector or the radio control perform opening and closure tests and ensure that each movement of the gate corresponds to the control unit settings. Perform as many checks as necessary to be certain of perfect operation.
- Check that the eight red leds (from L7 to L14 fig. 34) on the control unit's vertical terminal board light when the external contact of the specific device is closed, to indicate that the device is in use.
- Check that led 8 or 9 of the keyboard (fig. 37) indicate the reaching of the limit switch with a fixed light for both opening and closure.
- In particular, for photocell checks, check that there is no interference with other devices. Pass a cylindrical tube with a diameter of 5cm and a length of approximately 30 cm through the optic axis that connects the two photocells. Perform this check firstly close to the transmitter and then close to the receiver and lastly halfway between the two.
- In all three cases, the device must intervene by passing from the active state to the alarm state and vice versa, thus causing the action set on the control unit: for example, during a closure manoeuvre it must cause inversion of movement.
- Perform the photocell operation test required in compliance with EN standard 12445 p. 4.1.1.6. The results must satisfy EN standard 12453 p. 5.1.1.6.

ATTENTION: 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 EN standard 12445 must be repeated.

7.2 FIRST USAGE

The automation may only be used for the first time once all the checks described in the TESTING chapter have been performed successfully. The automation may not be used in precarious or temporary conditions.

- a) Compile a technical file for the automation, which must include at least:
 - a general mechanical and electrical diagram,
 - risk analysis and solutions adopted for eliminating or reducing risks,
 - manuals of the individual components,
 - list of the components used,
 - instructions for use and warnings concerning use for the owner,
 - system maintenance record
 - declaration of the system's CE conformity
- b) Fix a CE marking plate to the gate, bearing at least the following information:
 - Name and address of the party responsible for installation and testing;
 - Type of automation;
 - Model;
 - Registration number;
 - Year of installation
 - CE mark
- c) Fill in the declaration of conformity and give it to the owner of the automation.
- d) Compile the guide with the instruction manual (EN 12635 p. 5.3 and 5.4) and give it to the owner of the automation.
- e) Compile the maintenance and improvement log (EN 12635 p.5.3) and give it to the owner of the automation.
- f) Compile the guide containing the instructions for maintenance that provides instructions concerning the maintenance of all automation devices (EN 12635 p. 5.3 and 5.5) and give it to the owner of the automation.
- g) Before the first use of the automation, the owner must have been given adequate information concerning hazards and residual risks.



8 ADVANCED ADJUSTMENTS AND SETTINGS

8.1 KEYBOARD

For all the following descriptions refer to fig. 40.

- To select and enable one of the two areas of the keyboard (right - blue, left - yellow), press either the <LEFT KEYBOARD> (A) or the <RIGHT KEYBOARD> (B) keys.
- On the enabling of the desired zone the two leds (6-8 or 7-9) corresponding to the chosen area with flash alternatively.
- The de-selection of the keyboard takes place automatically after a certain interval of inactivity.

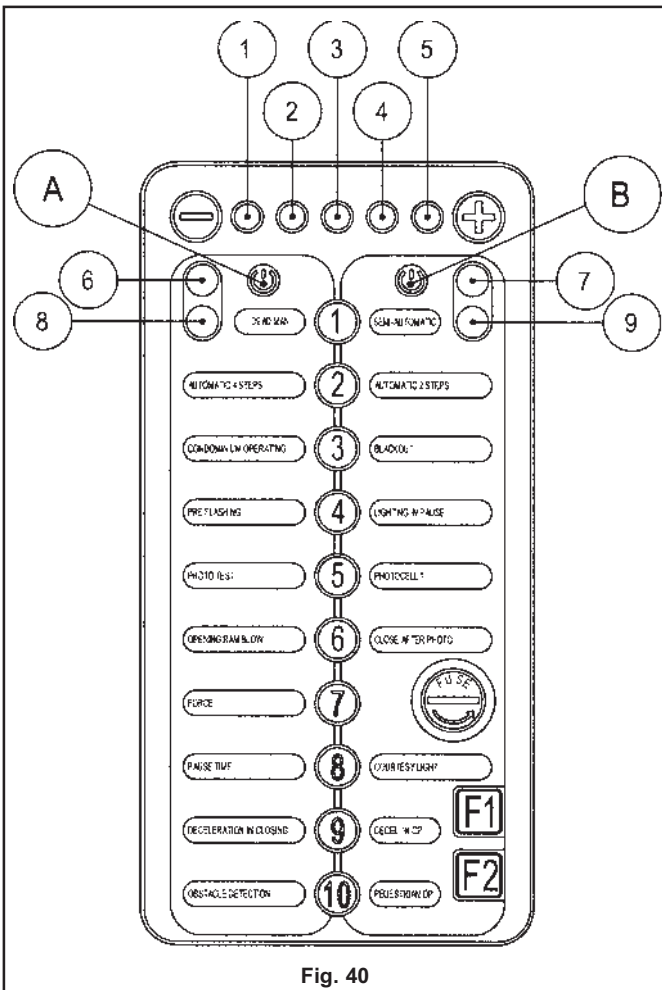


Fig. 40

8.1.1 TOTAL RESET OF THE CARD

In this way it is possible to reset all the initial identifications of the direction of movement, travel and speed, thus reverting to the initial default setting described in tab. 8.

- Hold down the <-> key and switch on the voltage using the release hatch (by opening and closing the hatch);
- After a few seconds the leds <1>, <2>, <3>, <4> and <5> will switch on;
- Release the keys to complete resetting
- At this point the 2 red leds (8 and 9) will start to flash.

8.1.2 RESETTING THE GATE TRAVEL

This function allows the reset of the gate travel distances (length of the stroke and reference speed) and the automatic mode; all the other previously stored settings do remain in the memory.

- Press and hold down the <+> key and switch on power using the release hatch;
- After a few seconds leds <1> and <2> will light up;
- Release the <+> key to complete the reset function.

8.1.3 PRESET FUNCTIONS F1 AND F2

The control unit parameters can be set individually as indicated in the subsequent paragraphs. Two standard settings are available and their settings are defined in tab. 8.

To activate press the <RIGHT KEYBOARD> key and then the <F1> or <F2> key, and hold down until the leds (7 or 9)

Stop flashing for a brief interval.

8.1.4 DEAD MAN MODE

- All the commands are given in a persistent manner without self-hold.
- To view the status press the <LEFT KEYBOARD> key and then key <1>: the mode is enabled if the green led (6) is lit, and it is disabled if led red (8) is lit.
- To activate it press the <LEFT KEYBOARD> key.

8.2 AUTOMATIC MODE

<AUTOMATIC> mode can be activated in four different modes:

- SEMI-AUTOMATIC
- 2-STEP AUTOMATIC
- 4-STEP AUTOMATIC
- CONDOMINIUM OPERATING MODE

N.B. : the selection of one mode excludes the others (including the dead man mode). On the status display, a mode is enabled if green led 6 or 7 is lit and is activated if red led 8 or 9 is lit.

8.2.1 SEMI-AUTOMATIC MODE

In <SEMI-AUTOMATIC> mode automatic closure is not enabled and all the commands must be given by the user using the radio control, selectors and button panel.

- To view the status press the <RIGHT KEYBOARD> key and then the <1> key.
- To activate press the <RIGHT KEYBOARD> key.

8.2.2 2-STEP AUTOMATIC MODE

In the <2-STEP AUTOMATIC> mode, automatic closure is enabled. All the commands given by the user using the radio control, selectors and button panel are commands devoid of stoppage and always in movement, i.e., if during the opening phase the user gives a command, the gate stops and starts again for closure.

E.g. 1 – OPEN 2 – CLOSE.

- To view the status press the <RIGHT KEYBOARD> key and then the <2> key.
- To activate press the <RIGHT KEYBOARD> key.



Tab. 8: default parameters set, in F1 and F2

Function	Default parameters	Reset parameters F1	Reset parameters F2
(manual operation) dead man	ON	OFF	OFF
Semi-automatic	OFF	OFF	OFF
Automatic 2-steps	OFF	OFF	OFF
Automatic 4-steps	OFF	ON	OFF
Condominium operating mode	OFF	OFF	ON
Blackout	OFF	ON	ON
Pre-flashing	OFF	OFF	ON
Lightning in pause	OFF	OFF	ON
Photo test	OFF	ON	ON
Photocell 1	OFF	ON	OFF
Opening ram blow	OFF	OFF	OFF
Close after photo	OFF	ON	OFF
Force	Medium (3 out of 5 leds)	Value not altered with the "F1" or "F2" key	
Pause time	OFF	80 sec.	60 sec.
Courtesy light	OFF	OFF	OFF
Deceleration in closing	Max	Max	Max
Deceleration in opening	Max	Min	Min
Obstacle detection	Medium (3 out of 5 leds)	Value not altered with the "F1" or "F2" key	
Pedestrian opening	Min	Min	Min

8.2.3 4-STEP AUTOMATIC MODE

In the <4-STEP AUTOMATIC> mode automatic closure is enabled. All the commands given by the user are step by step impulsive commands and include stoppage functions, i.e., if the user gives a command during the opening phase, the gate stops and another command must be given to make it start again.

E.g. 1 – OPEN 2 – STOP 3 – CLOSE 4 – STOP

- To view the status press the <LEFT KEYBOARD> key and then the <2> key.
- To activate press the <LEFT KEYBOARD> Key .

8.2.4 CONDOMINIUM OPERATING MODE

In the <CONDOMINIUM OPERATING> mode, automatic closure is enabled. The only command that can be given is <OPEN>. All opening operations after giving the <OPEN> command are completely automatic with reference to the parameters set. Closure only takes place by automatic re-closure.

- To view status press the <LEFT KEYBOARD> key and then key <3>
- To activate press the <LEFT KEYBOARD> key.

8.3 ON/OFF SELECTORS

ON/OFF selectors <BLACKOUT>, <PRE-FLASHING>, <FLASHING DURING PAUSE>, <PHOTO TEST>, <PHOTO 1>, <CLOSE PASSING>, <OPENING RAM BLOW>.

All these functions are set as selectors. Having chosen the area of the keyboard on which to operate, check the function to be set.

The settings entered in the function can be displayed in the following way:

- green led (6 or 7) lit: function set in <ON> mode.
- red led (8 or 9) lit: function set in <OFF> mode.

By pressing the <LEFT KEYBOARD> or <RIGHT KEYBOARD> key the state of the ON/OFF selection is inverted.

8.3.1 BLACKOUT SELECTOR

The <BLACKOUT> selector has the function of automatically enabling the first movement subsequent to the power being switched back on after a power failure of any duration.

To define function press the <RIGHT KEYBOARD> key and then the <3> key.

Leds (7 e 9) show the status in this way:

- Green led (7) on: function set in <ON> mode. When the power supply returns in a mode that foresees automatic re-closure, it waits the pause time set, performs pre-flashing and starts the search for the closure limit switch at a slow speed.
- Red led (9) on: function set in <OFF> mode. The first command for the closure limit switch coincides with the first command given by the user.

By pressing the <RIGHT KEYBOARD> key the OFF/ON selection is inverted.



8.3.2 PRE-FLASHING SELECTOR

The <PRE-FLASHING> selector has the function of enabling a pre-flashing by the flashing light before the start of a closure or opening cycle. In order to view the function press the <RIGHT KEYBOARD> key and then the <4> key.

The indicator leds (6 and 8) display status in this way:

- Green led (6) on: function set in <ON> mode. After the command it opens or closes for a few seconds, performs pre-flashing and then gate opening or closure commences.
- Red led (8) on: function set in <OFF> mode, that is the flashing light only functions during opening or closure of the gate, without performing pre-flashing.

By pressing the <LEFT KEYBOARD> key the status of the OFF/ON selection is inverted.

8.3.3 LIGHTING IN PAUSE SELECTOR

The <LIGHTING IN PAUSE> selector has the function of enabling the flashing light during the pause before the start of the automatic closure cycle.

To view the function press the <RIGHT KEYBOARD> key and then the <4> key.

The leds (7 and 9) display the status in this way:

- Green led (7) on: function set in <ON> mode. The flashing light flashes during the wait phase for automatic closure of the gate.
- Red led (9) on: function set in the <OFF> mode. Function deactivated.

By pressing the <RIGHT KEYBOARD> function key, the status of OFF/ON selection is inverted

8.3.4 PHOTOTEST SELECTOR

The <PHOTO TEST> selector has the function of enabling the operation test of the photocells applied to the installation when the gate is immobile in the open and closed positions. This test can be performed automatically by the control unit at the end of the opening or closure cycle.

To view the function press the <LEFT KEYBOARD> key and then the <5> key.

The leds (6 and 8) display the status as follows:

- green led (6) on: function set in <ON> mode. Function enabled; the control unit will perform the test when the gate is open and closed;
- red led (8) on: function set in <OFF> mode. Function deactivated.

By pressing the <LEFT KEYBOARD> the ON/OFF selection is inverted.

The test is selective, it is only conducted on the selected photocells. The applications can be: PHOTO; PHOTO and PHOTO 1; PHOTO, PHOTO 1 and PHOTO 2.

In order to program the test of the photocells installed, having selected the <PHOTO TEST> function use the <+> or <-> keys. By pressing the keys the leds on the top bar light (from 1 to 5):

- led 1 lit: test enabled on PHOTO.
- led 1 and 2 lit: test enabled on PHOTO and PHOTO 1.
- led 1, 2 and 3 lit: test enabled on PHOTO, PHOTO 1 and PHOTO 2.

ATTENTION: it is important to set <PHOTOTEST> correctly in order to prevent testing photocells not present and the check detecting the abnormality.

8.3.5 PHOTO 1 SELECTOR

The <PHOTO 1> selector has the function of setting the internal photocell during opening or closure phases.

To define the function press the <RIGHT KEYBOARD> key and then the <5> key.

The leds (7 and 9) display the status in this way:

- green led (7) on: function set in <ON> mode. If during the opening or closure phase the internal photocell beam is interrupted, the gate stops. Motion recommences in opening when the photocell is disengaged.
- red led (9) on: function set in <OFF> mode. It does not intervene during opening, during closure it causes the inversion of the gate's movement to opening.

By pressing the <RIGHT KEYBOARD> key the status of OFF/ON selection is inverted.

8.3.6 CLOSE AFTER PHOTO SELECTOR

The <CLOSE AFTER PHOTO> selector has the function of enabling the automatic closure of the gate after the crossing of the external photocell beam.

To define the function press the <RIGHT KEYBOARD> key and then the <6> key.

The leds (7 and 9) display the status as follows:

- green led (7) on: function set in <ON> mode. After the interruption of the beam of the external photocell and a wait time of a few seconds, the gate closes automatically. When the gate is open, it memorises a closure command generated by the photocell.
- red led (9) on: function set in <OFF> mode. Function deactivated.

By pressing the <RIGHT KEYBOARD> key the status of ON/OFF selection is inverted.

8.3.7 OPENING RAM BLOW SELECTOR

The <OPENING RAM BLOW> selector has the function of enabling an extra travel of the gate before opening in order to release the electrolock.

To define the function press the <LEFT KEYBOARD> key and then the <6> key.

The leds (6 and 8) display the status in the following way:

- green led (6) on: function set in <ON> mode. Having given the opening command to the gate, another travel is performed for a set time.
- red led (8) on: function set in <OFF> mode. Function deactivated.

By pressing the <LEFT KEYBOARD> key the OFF/ON selection status is inverted.

The time set can be varied by using the <+> or <-> keys and the value is shown on the bar of the 5 horizontal leds (from 1 to 5) (1 led = minimum time; 5 led = maximum time).

When the function is enabled the upper green led (6) is on; when the function is deactivated the lower red led (8) is deactivated.



Tab. 9: correspondence between number of leds lit and time set

Led	Value
No led lit	Function deactivated
led 1	Minimum opening ram blow time
led 1 and 2	
led 1, 2 and 3	
led 1, 2, 3 and 4	
led 1, 2, 3, 4 and 5	Maximum opening ram blow time

8.4 PROGRESSIVE FUNCTIONS

Progressive functions <FORCE>, <PAUSE TIME>, <COURTESY LIGHT>, <DECELERATION IN CLOSING>, <DECELERATION IN OPENING>, <OBSTACLE DETECTION>, <PEDESTRIAN OPENING>.

All these functions can be programmed using the <+> or <-> keys and the value is displayed on the horizontal led bar (from 1 to 5).

1 led = minimum value; 5 led = maximum value

8.4.1 FORCE FUNCTION

The <FORCE> function enables the adjustment of the motor power supply voltage and consequentially the thrust supplied to the motor.

- Voltage adjustment is performed directly on the autotransformer using the slider selector fitted (fig. 38).
- Move it towards lower values on the scale to reduce the torque. Move it towards higher values to increase the torque
- It is possible to further intervene on the adjustment of the force for the stretches performed at slow speed by using the keyboard as described below.
 - a) To set the value press the key (A) <LEFT KEYBOARD> and then the <7> key.
 - b) Use the <+> or <-> keys to adjust the value by referring to the indication shown by the lighting of the leds (from 1 to 5).

Tab. 10: correspondence between number of leds lit and operator force in deceleration

Led	Value
No led lit	Minimum
led 1	
led 1 and 2	
led 1, 2 and 3	
led 1, 2, 3 and 4	
led 1, 2, 3, 4 and 5	Maximum

8.4.2 PAUSE TIME FUNCTION

This function enables the user to adjust the pause time between the stop in a totally open position and automatic closure.

- To set the value press the <LEFT KEYBOARD> key and then the <8> key.
- Use the <+> or <-> key to regulate the value referring to the indication displayed by the lighting of the horizontal leds. The minimum value is of 20 seconds.
- When the function is enabled the upper green <ON> (6) led is lit; when the function is deactivated, the lower red led <OFF> (8) led is lit (8).

Tab. 11: correspondence between the number of leds lit and the pause time

Led	Value
No led lit	Function deactivated
led 1	20 s
led 1 and 2	40 s
led 1, 2 and 3	60 s
led 1, 2, 3 and 4	80 s
led 1, 2, 3, 4 and 5	100 s

8.4.3 COURTESY LIGHT FUNCTION

This function enables the User to adjust the duration of the time that the courtesy light switches on for.

- To set the value press the <RIGHT KEYBOARD > key and then the <8> key.
- Use the <+> or <-> key to adjust the value referring to the indication displayed by the switching on of the horizontal leds (from 1 to 5).
- When the function is activated, the upper green <ON> (7) led is lit, when the function is deactivated the lower red <OFF> (9) led is lit.

Tab. 12: correspondence between the number of leds lit and light time

Led	Value
No led lit	Function deactivated
led 1	20 s
led 1 and 2	40 s
led 1, 2 and 3	60 s
led 1, 2, 3 and 4	80 s
led 1, 2, 3, 4 and 5	100 s

8.4.4 DECELERATION IN CLOSING FUNCTION

This function enables the user to adjust the duration of the stretch travelled by the gate at reduced speed as it approaches closure.

- To set the value press the <LEFT KEYBOARD> and then the <9> key.
- Use the <+> or <-> keys to adjust the value referring to the indication displayed by the switching on of the horizontal leds (from 1 to 5).
- The maximum value (five leds on) corresponds to 20% of the effective travel, each level reduces the maximum value by 4%.
- It is possible to exclude this function, by pressing the <-> key until all five leds switch off.
- When the function is activated, the upper green <ON> (6) led is lit, when the function is deactivated the lower red <OFF> led (8) is lit.

Tab. 13: correspondence between the number of leds lit and the deceleration approaching closure

Led	Value
No led lit	Function deactivated
led 1	4 % of travel
led 1 and 2	8 % of travel
led 1, 2 and 3	12 % of travel
led 1, 2, 3 and 4	16 % of travel
led 1, 2, 3, 4 and 5	20 % of travel

8.4.5 DECELERATION IN OPENING FUNCTION

This function enables the user to adjust the duration of the stretch travelled by the gate at reduced speed during opening.

- To set the value press the <RIGHT KEYBOARD> and then the <9> key.
- Use the <+> or <-> keys to adjust the value referring to the indication displayed by the switching on of the horizontal leds (from 1 to 5).
- The maximum value (five leds on) corresponds to 20% of the effective travel, each level reduces the maximum value by 4%.
- It is possible to exclude this function, by pressing the <-> key until all five leds switch off.
- When the function is activated, the upper green <ON> (6) led is lit, when the function is deactivated the lower red <OFF> led (8) is lit.



Tab. 14: correspondence between the number of leds lit and the deceleration in opening

Led	Value
No led lit	Function deactivated
led 1	4 % of travel
led 1 and 2	8 % of travel
led 1, 2 and 3	12 % of travel
led 1, 2, 3 and 4	16 % of travel
led 1, 2, 3, 4 and 5	20 % of travel

8.4.6 OBSTACLE DETECTION FUNCTION

This function enables the user to vary the speed at which it causes stoppage for obstacles during operation. The value is calculated according to the measurements made during the self-identification of the travels and speeds.

- To set the value press the <LEFT KEYBOARD> key and then the <10> key.
- Use the <+> or <-> keys to regulate the value referring to the indication displayed by the switching on of the horizontal leds (from 1 to 5)
- The value set is a percentage in reference to the values read with self-identification.
- If during opening the obstacle detection device intervenes, the gate stops; if the intervention takes place during the closure phase the gate stops and reopens. In either case during obstacle detection the entire bar of horizontal leds (from 1 to 5) is temporarily activated at the time of detection

8.4.7 PEDESTRIAN OPENING FUNCTION

This function allows the user to adjust the length of the stretch of minimum opening for pedestrian access.

- To set the value press the <RIGHT KEYBOARD> key and then the <10> key.
- Use the <+> or <-> key to adjust the value referring to the indication displayed by the switching on of the horizontal leds (from 1 to 5).
- The value set is a percentage of an opening travel of the gate.
- When the function is activated the upper green <ON> (7) led is lit; when the function is deactivated the lower red <OFF> led (9) is lit.

Tab. 15: correspondence between the number of leds lit and the opening width

Led	Value
No led lit	Function deactivated
led 1	20 % of travel
led 1 and 2	40 % of travel
led 1, 2 and 3	60 % of travel
led 1, 2, 3 and 4	80 % of travel
led 1, 2, 3, 4 and 5	100 % of travel

8.5 FUSES

8.5.1 FRONTAL FUSE

The frontal fuse (fig. 41) is the fuse on the primary 230 Volt power supply that protects the autotransformer, the external light circuits and the motor from overloading.

Technical characteristics: miniature fuse 5x20 T3.15A IEC 60127 or EN 60127 certified.

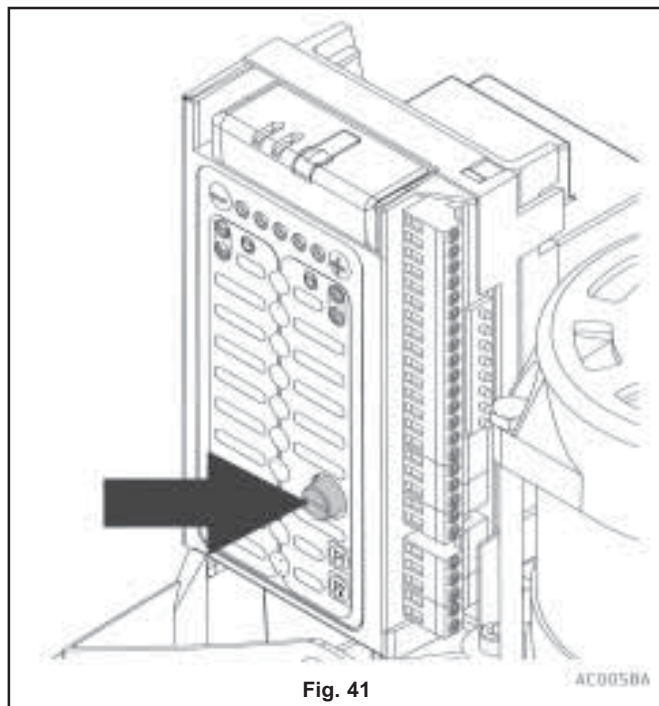


Fig. 41

8.5.2 CARD FUSES

Two internal fuses have been applied to the card: the first protects the electronic card power supply and the second protects the auxiliaries, i.e. the photocells, electro-lock, indicator light and other devices that the fitter may have powered with this line, within the relevant limits.

N.B. users are not authorised to tamper with the card fuses.

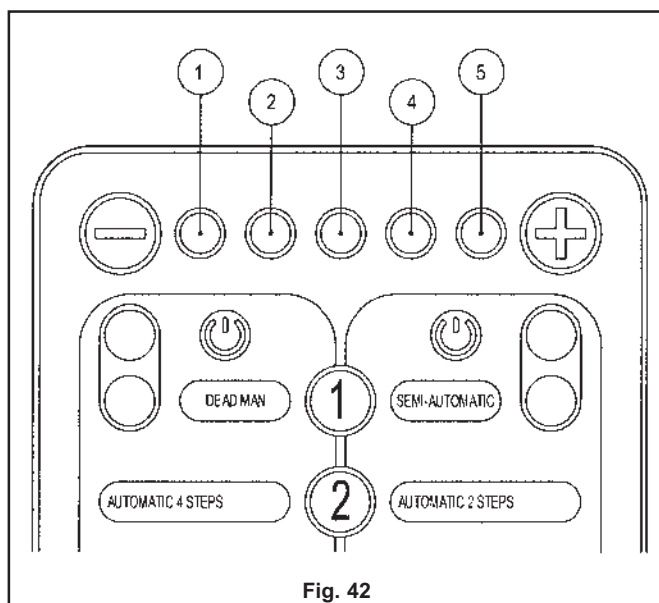


Fig. 42



9 DIAGNOSTICS

This chapter lists the problems most commonly encountered and the solutions for eliminating them. In certain cases it is expressly intended that the operations be performed by a professional installer: it is essential to respect such indications to avoid exposure to serious risks.

9.1 MALFUNCTIONS INDICATED BY THE CONTROL UNIT

The malfunctions detected by the control unit are indicated by the switching on of the five display leds (from 1 to 5 fig. 42) according to given combinations.

The control unit also signals to the exterior the presence of malfunctions by means of the flashing light: three flashes followed by a pause, when the motor is in movement.

9.2 REPLACING THE FRONTAL FUSE

If the power supply is switched on and the automation nevertheless does not work, it is necessary to check the frontal fuse of the control unit. This operation must be performed by a PROFESSIONAL FITTER. Before replacing the fuse, it is essential to understand the reasons for the interruption: only then can a new fuse be introduced into the fuse clip.

- a) Switch off the power supply.
- b) Remove the clamping screws and the operator cover (1 fig. 26).
- c) Press and simultaneously rotate the fuse clip plug towards the left (fig. 41).
- d) Remove the fuse and replace it with a new one.
- e) Place the plug on the fuse and fix it by pressing and rotating towards the right.

The fuse must be of the same type and have the same technical characteristics as that prescribed in the FRONTAL FUSE chapter. It must be IEC 60127 or EN 60127 certified.

Tab. 16: malfunctions detected by the control unit

Malfunction	Signal (leds lit)	Description	Operation	Possible remedy
Closure limit switch	2	The system receives the opening/closure limit switch signal in a moment that is not within the expected interval, or is in advance, or it does not receive it	The check intervenes by blocking the automation and passing it to a dead man function (commands without self-hold) and at a reduced speed.	Try to perform a travel (slowed movement and persistent command) for a complete return cycle. Call Assistance Service if the problem persists.
Opening limit switch	1 - 2			
Encoder	1 - 3 - 5	The encoder continues to count and therefore to emit a signal even when the system expects the motor to be switched off.	The check intervenes by blocking the automation.	Try to give further commands. Call Assistance Service if the problem persists.
Obstacle	1 - 2 - 3 - 4 - 5	The system has detected the presence of an obstacle in its travel due to the observation of a reduction in speed compared to that expected.	The check intervenes during closure, thus inverting motion and opening and when it reaches the end of the travel it awaits a new signal (even in condominium operating mode function); if the system is opening it intervenes by inverting motion for a short stretch (3/4 cm) and then stops and awaits further commands.	NOTE: the adjustment of the sensitivity to the obstacle is described in the ADVANCED ADJUSTMENTS AND SETTINGS chapter.
Photocells	4 - 5	The phototests (ADVANCED ADJUSTMENT AND SETTINGS chapter) detect a malfunction of the photocells.	The check intervenes by maintaining the system in stoppage conditions.	Check the phototest setting and try to give a further command to perform the phototest again. Call Assistance Service if the problem persists.
Individual fault	1 - 2 - 3	This category includes various situations of incorrect and unsafe operation	The check intervenes by placing the system in the operating condition using persistent commands and reduced speeds.	Note: in this situation the automation requires releasing - call the Assistance service.

Note: if problems persist it is absolutely necessary to call the Assistance Service.



10 SPARE PARTS

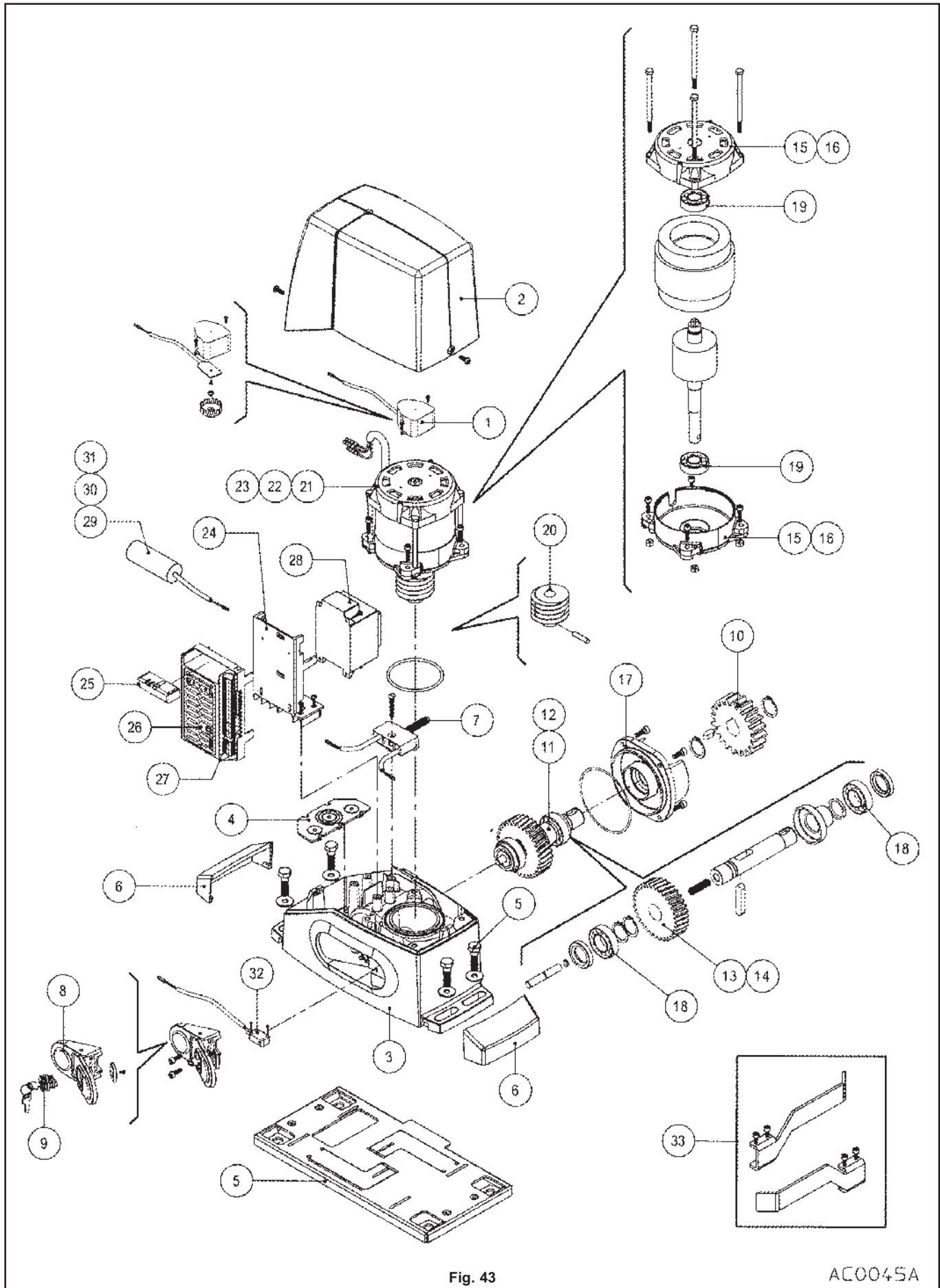


Fig. 43

AC0045A



Tab. 17: list of spare parts

Pos.	CODE	DESCRIPTION
1	5RI0010000	ENCODER SPARE
2	5RI0020000	SLIDING LID SPARE
3	5RI0030000	SLIDING BASE SPARE
4	3SP1120002	CABLE GLAND HATCH
5	1AM0160000	AACS ACER
6	5RI0260000	SLIDING FEET COVER SPARE
7	5RI0050000	SLIDING ELECTRIC LIMIT SWITCH SPARE
8	5RI0060000	SLIDING RELEASE SPARE
9	4NO0520000	SLIDING LOCK BLOCK
10	5RI0070000	M4 PINION SPARE
11	5RI0080000	TRANSMISSION SPARE FOR AC4 AND AC6
12	5RI0090000	TRANSMISSION SPARE FOR AC8
13	3DE0220000	M2.5 Z33 L20 PINION IN CAST IRON
14	3DE0210000	M2.5 Z33 L27 PINION IN NYLON
15	5RI0100000	SLIDING MOTOR CAP SPARE. AC4 AC6
16	5RI0110000	SLIDING MOTOR CAP SPARE. AC8
17	5RI0120000	FLANGE SPARE
18	5RI0270000	BALL BEARING SPARE 6005-2RS
19	5RI0280000	BALL BEARING SPARE 6003-2RS
20	5RI0130000	WORM SCREW
21	5RI0140000	SLIDING MOTOR SPARE AC6
22	5RI0150000	SLIDING MOTOR SPARE AC8
23	5RI0160000	SLIDING MOTOR SPARE AC4
24	5RI0170000	CARD SUPPORT SPARE
25	1AR0030000	RADIO RECEIVER (SKYR2)
26	1AH0010000	AGEM1(card container)
27	1AH0030000	RG1 (electric card
28	1AB0090000	RT230 (autotransformer)
29	4CL0210000	SLIDING CAPACITOR AC6
30	4CL0960000	SLIDING CAPACITOR AC8
31	4CL0940000	SLIDING CAPACITOR AC4
32	5RI0210000	MICRO RELEASE SPARE
33	5RI0220000	LIMIT SWITCH RACKET SPARE



11 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
AC4 – AC6 – AC8

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.

Fontanelle 30-09-04

Name of Signor: **Faustino Lucchetta**

Position: **Managing Director**

Signature:

INSTRUCTIONS AND INDICATIONS FOR USE AND MAINTENANCE

Congratulations for having purchased a new **LIFE home integration** product. The ACER operator is the product of **Life home integration's** ongoing research and experimentation; it represents the highest possible level of reliability, safety and performance.

SAFETY INSTRUCTIONS AND WARNINGS

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.



USING THE AUTOMATION

In order to open the gate, activate the opening command using the radio control or key selector.

The operating modes available are as follows:

- a) **DEAD MAN MODE:** all commands must be kept enabled at the end of the movement requested; this mode is usually used only in the event of automation malfunctions.
- b) **AUTOMATIC**, which has four sub-modes:
 1. **SEMI-AUTOMATIC mode:** automatic closure is not enabled and all the commands must be given by radio control, selectors and button panel.
 2. **2-STEP AUTOMATIC mode:** automatic closure is enabled; all the commands given by the user are only for movement and have no stop, that is, if during the opening phase the user gives a command, the gate stops and starts again for closure.
 3. **4-STEP AUTOMATIC mode:** automatic closure is enabled; all the commands given by the user are step – by – step and also include the stop function, i.e. if during the opening phase the user gives a command, the gate stops and another command must be given for it to start again.
 4. **CONDOMINIUM OPERATING MODE:** automatic closure is enabled and it is possible to give the opening command only; all subsequent operations are completely automatic and based on the parameters set. Closure is automatic.

ATTENTION: it is forbidden for users to modify the parameters set on the control unit. This operation must be performed by a PROFESSIONAL FITTER.

FUNCTIONS SET ON THE RADIO CONTROL (fig. 44)

The fitter must fill in the following table according to the settings performed on the control unit:

Key	Function
Key T1	
Key T2	
Key T3	
Key T4	

FUNCTIONS SET ON THE KEY SELECTOR

The installer must fill in the table below according to the settings performed on the control unit:

Action	Function
Turn to right	
Turn to left	

FLASHING LIGHT FUNCTIONS

Flashing light functions

The flashing light is a safety device used to indicate at a distance that the gate is in motion. The signals given by the flashing lamp are not always the same and depend on the movement (opening or closure) that the gate is performing.

The flashing light is also used by the automation's control unit to indicate malfunctions. In this case the light signals emitted from the flashing light are different from those that are emitted normally.

The flashing light has three flashing modes:

1. slow for the gate opening phase;
2. fast (flashes twice as fast) for the closure phase;
3. particular flashing characterised by three flashes followed by a pause to indicate a malfunction.

AUTOMATION MALFUNCTION

The automation indicates malfunctions externally through the flashing light (three flashes followed by a pause); the user may attempt to resolve minor problems in the following way:

- a) pressing and holding the movement command (key of the radio control or selector);
- b) if the gate moves at a reduced speed, perform a number of opening and closing cycles by pressing and holding the command key;
- c) close the gate and switch off and then on again the power supply.

ATTENTION: if the problem persists or occurs frequently, contact the assistance service.

In this case switch off the operator's electricity supply, do not attempt "amateur" repairs and only use the gate in manual mode, having released the operator (chap. OPERATOR RELEASE).

OPERATOR RELEASE

This control is used in the event of blackouts or system malfunctions, to release the operator's transmission and allow manual movement of the gate.

The release function is controlled by a key that activates a mechanic device that releases the transmission.

The release key must be kept in a safe place.

- a) Slide the lock cover sideways (fig.22).
- b) Introduce the key into the lock (fig. 23) and rotate through 90° to the left; the release hatch is now free.
- c) Pull the key slightly outwards so that the hatch protrudes, then use the fingers to pull the hatch outwards to open completely (fig. 24). In this way, the hatch, which is fitted with a cam, disconnects the transmission by means of a pin.
- d) The gate is now free and can be manoeuvred manually. A microswitch mounted on the locking device prevents the motor from functioning if the power supply is switched back on unexpectedly.
- e) To reconnect the transmission proceed in the opposite direction and move the gate manually until it connects

ATTENTION: in order to prevent breaking the key in the lock, do not apply excessive force.

ATTENTION: activating the manual release may cause uncontrolled movement of the gate due to damage or mechanical unbalance.

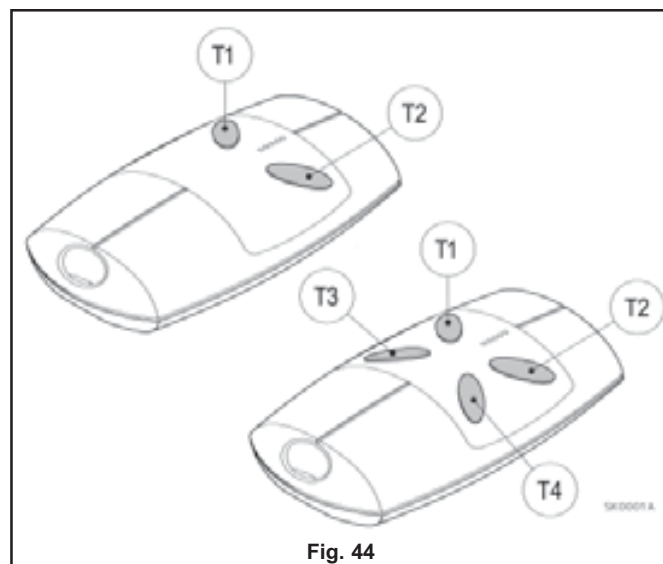


Fig. 44



MAINTENANCE

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.**



LIST OF RESIDUAL RISKS PRESENT IN OPERATION

The fitter must take the relevant action to point out and notify by means of signs applied to the points of potential risk on the automation and/or written indications to be handed over and explained to the owner of the gate, or responsible party, concerning any risks existing and foreseeable improper use of the automation

The indications to be given must be obtained from the Risk Analysis for the Technical File.

Type of risk	Position on operator	Measures to be adopted for reducing residual risks

Fitter's signature

Owner/user's 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

