



LIGHT MILLENNIUM

Automatizms for sliding doors



Organizzazione con Sistema
di Gestione certificato
Company with Management
System certified

ISO 9001:2000



I N S T A L L A T I O N I N S T R U C T I O N



CERTIFICATE

The Certification Body TÜV Rheinland Group certifies, in accordance with the TÜV Rheinland Group procedures, that the Company

SESAMO S.r.l.
Strada Gabannone, 8/10
I - 15030 Terruggia (AL)

has established and applies a quality management system for the following scope:

Design and production of automatic doors. EA 17, 18

Through an Audit, Report No. 130610, proof has been furnished that the requirements according to the standard

UNI EN ISO 9001:2000

are fulfilled.

Please refer to the Quality Manual for the details about the exclusions with respect to the requirements of the standard.

Certificate Registration No. **39 00 1130610**.

The validity of this Certificate is subject to periodical annual / semi-annual surveillance and to a complete review of the management system of the Company every three years.

Milan, 2006-10-17.

The Certification Body
TÜV Rheinland Group



SGQ N° 083A
Membro degli Accordi di Mutual Riconoscimento EA ed IAF
Signatory of EA and IAF Mutual Recognition Agreements

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SESAMO reserves the right to change the technical specifications of the products, even without notice.

Thank you for choosing this product. For best automatism performance, Sesamo recommends you carefully read and follow the installation and use instructions found in this manual. Installation of this automatism must only be performed by the professionally qualified personnel for whom this manual is addressed. Any errors during installation may be harmful to people or things. Packaging material (wood, plastic, cardboard, etc.) should not be scattered in the environment or left within the reach of children as potential sources of danger. Every installation phase must be performed in accordance with the regulations in force and following Good Technique standards. Before beginning installation make sure that the product is integral and has not been damaged during transportation or by poor storage conditions. Before installing the product make sure that each architectural and structural element of the entrance (girder fastening surfaces, casings, guide, etc.) is appropriate and sufficiently robust to be automated. Conduct a careful risk analysis and make suitable modifications to eliminate conveyance, crushing, cutting and hazardous areas in general. Do not install the product in environments where gas, steam or inflammable fumes are present. The manufacturer is not liable for any neglect of "good technique" or specific regulations in the construction of the casing to be motorised and any collapse of the same. All automatic entrance safety and protection devices (photocells, active sensors, etc.) must be installed in accordance with the regulations and directives in force, with the completed risk analysis, system type, use, traffic, forces and inertia in play. Pay careful attention to area where the following may occur: crushing, cutting, conveyance and any other type of hazard in general applying, if necessary suitable indications. Indicate the motorised door identification information on every installation. Make sure that the upstream electrical system is correctly dimensioned and has all the opportune protections (circuit breakers and fuses). Only use original spare parts in maintenance and repairs. Do not tamper or alter devices in the automatism and all the safety devices in the control panel for any reason. The manufacturer is not liable if parts within the automatism are altered or tampered with or if safety devices other than those indicated by the manufacturer are used in the system. The automatism installer must provide the automatic entrance manager with the use manual and all the information required for correct use in automatic and manual modes (even for electronic locking) and in the event of emergency.

Pay careful attention to the messages in this manual that are marked with the hazard symbol. They can either be warnings aimed at avoided potential equipment damage or specific signals of potential hazard to the installer and others. This device was designed to automate sliding doors. Any other use is considered contrary to the use foreseen by the manufacturer who therefore shall not be held liable.

Machine directive

The installer who motorised a door becomes the automatic door machine manufacturer according to directive 98/37/CE and must:

- Arrange the Technical Booklet with the documents indicated in attachment V of the Machine Directive and keep them for at least 10 years.
- Draft the CE declaration of conformity according to attachment II-A of the machine directive and provide the use with a copy.
- Apply the CE markings on the motorised door according to point 1.7.3 of attachment I of the machine directive.

For more information and for assist installers in applying the specifications of the directives and of European standards concerning the safe use of motorised gates/doors consult the guidelines available on internet at the address www.sesamo.eu

Machine conformity directive

(Directive 98/37 CE, Attachment II, part B)

Manufacturer: SESAMO S.r.l.
Address: Str. Gabannone 8/10 - 15030
Terruggia - AL

Declares that the product **LIGHT MILLENNIUM**

- Is built to be incorporated in a machine or to be assembled with other machinery to build a machine considered by Directive 98/37 CE, as modified;
- Therefore it is not fully compliant to the dispositions of this Directive since it is not yet assembled with other components.
- It is in conformity to the following other CE directives: 89/336/CEE Electro-magnetic compatibility and further modifications 73/23/CEE Low Voltage and further modifications and also declares that the machinery cannot be used until the machine it is incorporated in or is a component of has been identified and its conformity to Directive 98/37 CE conditions and national legislation declared.

Terruggia, 20/06/2003

Aldo Amerio
(Administrator)



Technical specifications

Power supply	230V ac 50 Hz
Nominal power	180 W
External device power	12Vdc – 6W
Emergency battery	24 V 1.2 Ah for about 100 manoeuvres in the event of power failure
Opening speed	Adjustable up to 70 cm/sec. (1 wing) or up to 140 cm/sec. (2 wings)
Closing speed	70% of opening speed
Capacity	One wing 120 Kg Two wings 80+80 Kg
Wing dimensions	One wing 700÷3000 mm. Two wings 450÷1500 mm.
Working temperature	Internal cross-piece from 0°C to +50°C
Anti-crushing	Automatic traction restriction in the presence of obstacles
Weight	8,5 kg per linear meter
Service	Intensive

Automatism installation preparation

The automatism is prepared to work in different accessory and peripheral configurations. **Fig. 1** shows a complete installation where the possible automatism box access points for peripheral connections are indicated. These peripherals include:

- A. Entry Radar
- B. Exit Radar
- C. Safety photocells
- D. Circuit breaker (230Vac)
- E. Logic selection selector
- F. Reset button
- G. Manual release handle
- H. Safety closing device

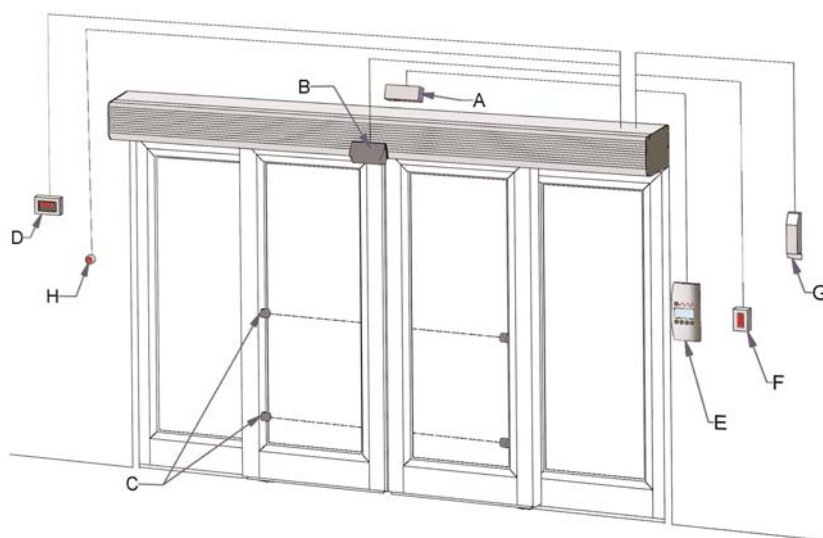


Fig. 1

Automatism description

The Light Millennium automatism (**Fig.2**) is essentially made up of:

- A. Extruded aluminium alloy box
- B. Extruded aluminium alloy automatism cover (optional)
- C. Bumper profile (optional)
- D. Gear motor unit
- E. Carriage complete with non-derailment device and steel wheel.
- F. Transmission belt
- G. Wing limit stop
- H. Electronic wing lock (optional)
- I. Integrated movement control modul

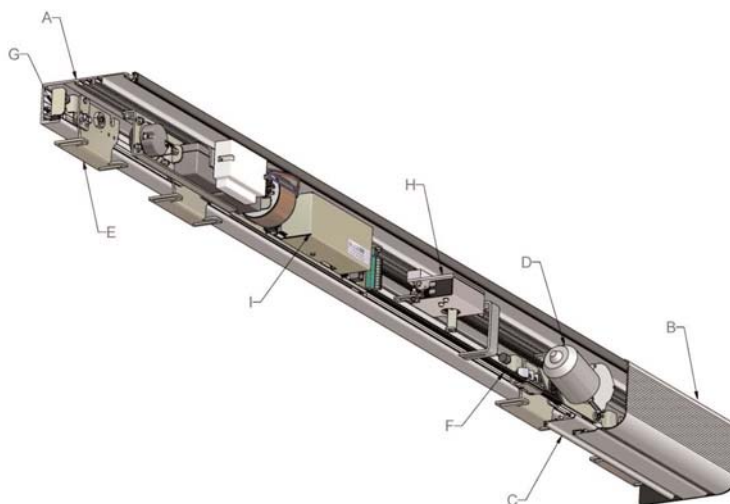


Fig. 2

The integrated movement control module (**Fig. 3**) is essentially made up of:

- A. Base support plate
- B. Encoder unit with belt adjustment device
- C. Electronic control panel
- D. Transformer
- E. Mains connection terminal board (230Vac)
- F. Emergency battery (optional)
- G. Safety electronic key decoder (optional)

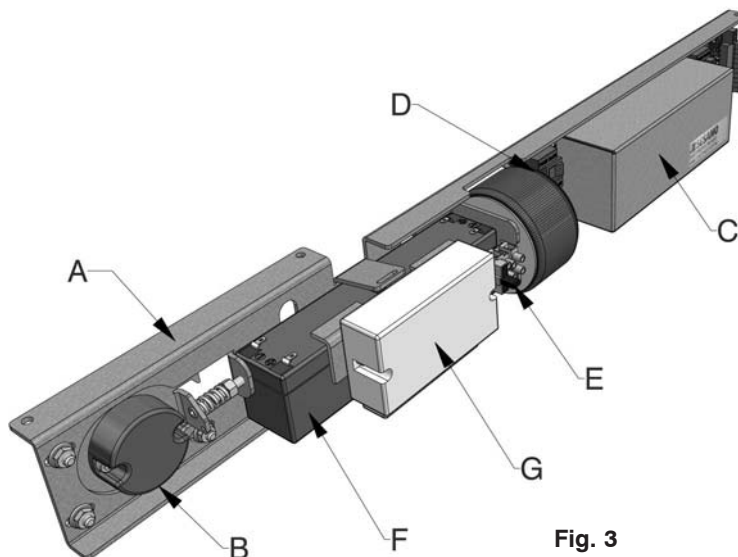


Fig. 3

Automatism girder assembly

Positioning quotas

The automatism must be centred to the transit area in two-wing cross-pieces so that the wings meet in the middle of the light space (**Fig. 4**).

For single wings observe the indications and machine quotas found in **Fig. 5**.

Cross-pieces with extensions (any unused box areas) should be positioned with the extensions summing QMC and QMT.

For the abbreviations found in **Fig.4** and **Fig.5** refer to the following table:

Lup:	Working transit width
A:	Sliding wing width
St:	Top wing clearance
Sc :	Bottom wing clearance
T :	Total box length
QMT :	Top machine quota (5mm)
QMC :	Bottom machine quota (5mm)

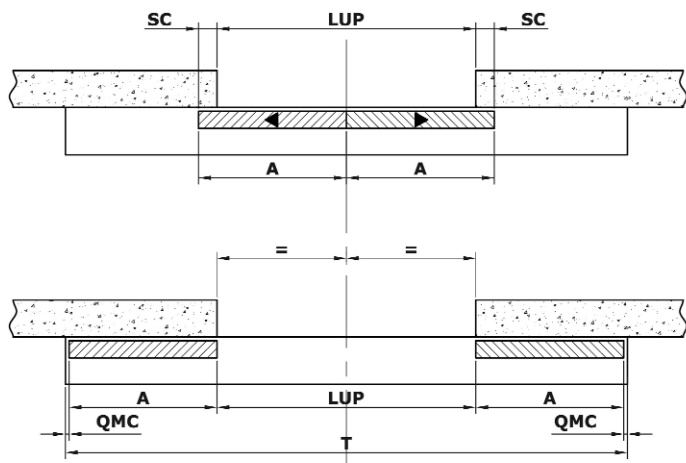


Fig. 4

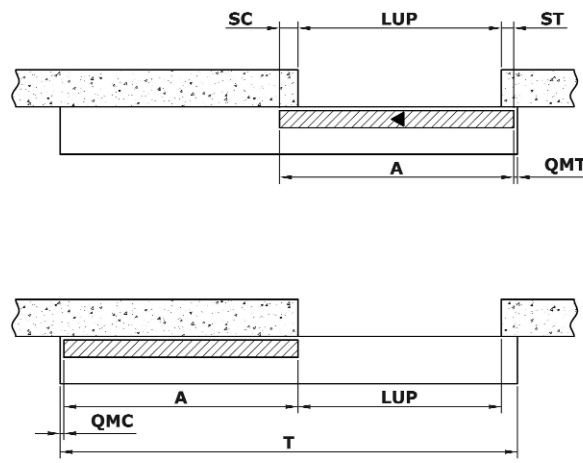


Fig. 5

Installation Instruction

Vertical cross-piece positioning must occur so that the indications in the formulas in:

- Fig.6** if standard wing profiles are used;
- Fig.7** if Sesamo mod. **SMALL** wing profiles are used;
- Fig.8** if Sesamo mod. **MAGNUM** wing profiles are used.

For the abbreviations found in **Fig.6**, **Fig.7** and **Fig.8** refer to the following table::

HAF :	Fixed wing height
HAS :	Sliding wing height
HCa :	Automation box height
HCo :	Automation cover height

	Standard wing profiles (Fig.6)	Sesamo SMALL wing profiles (Fig.7)	Sesamo MAGNUM wing profiles (Fig.8)
HAS =	HAF + 17 mm	HAF + 22 mm	HAF + 6 mm
HCa =	HAF + 47 mm	HAF + 54 mm	HAF + 44 mm
HCo =	HAF	HAF + 7 mm	HAF - 3 mm

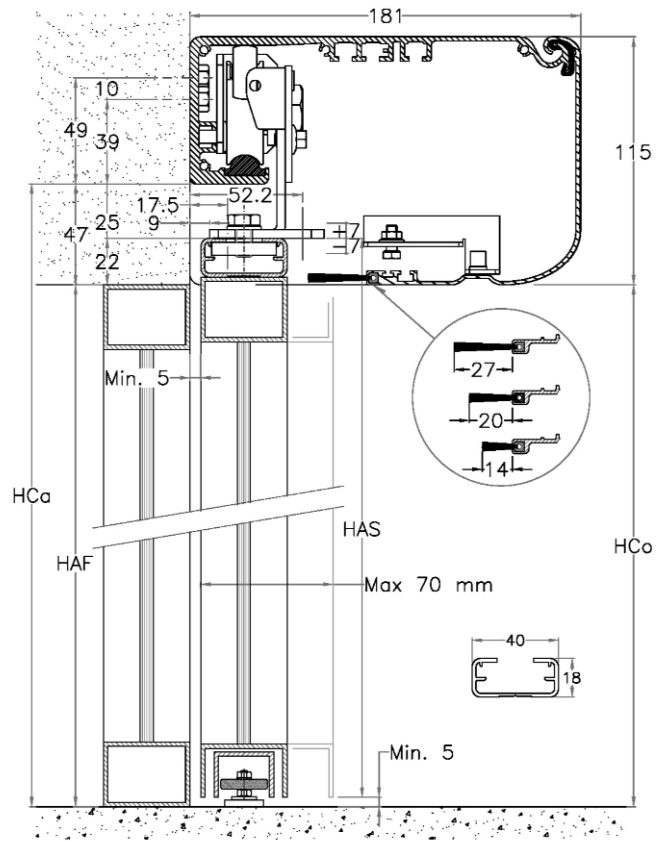


Fig. 6 - Standard wing profiles

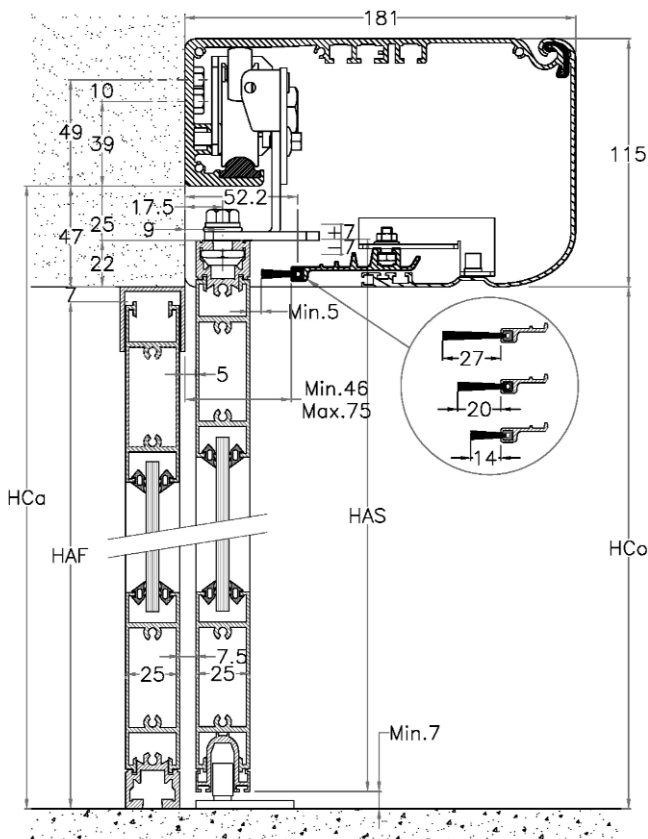


Fig. 7 - Sesamo SMALL wing profiles

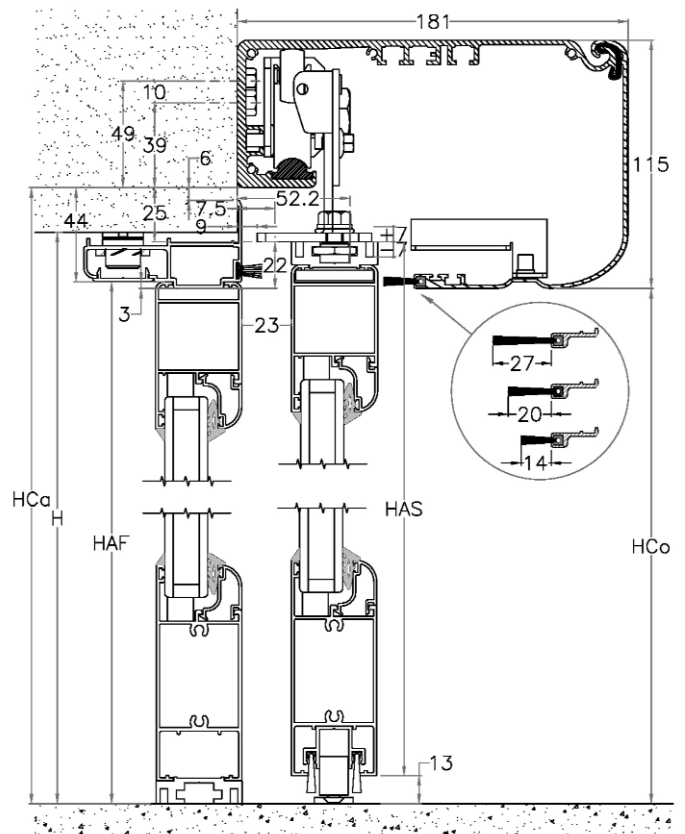


Fig. 8 - Sesamo MAGNUM wing profiles

Automatism component removal and movement

Unscrew the cover fastening screws **A** (if present) and remove as indicated in the sequence in **Fig.9**.

Remove the carriages as follows:

- Disconnect the belt fastening rod from the carriage using the fastening screws **B** (**Fig.10**)
- Loosen the anti-derailment device screws **C** and let the roller support rod completely lower (**Fig.10**)
- Remove the carriage



Fig. 9

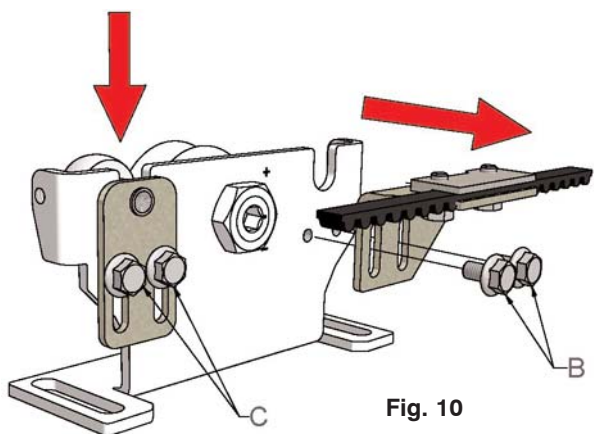


Fig. 10



Fig. 11

To facilitate box fastening operations, the internal automatism components can be moved or removed.



WARNING

Before loosening component lock screws to move components (**Fig.11**), measure the distance of the motor from the head or make marks on the box for correct component positioning at the end of assembly.

Box fastening

Inspect the surface where the box will be fastened, if the surface is not even, level with shims. The automatism girder may buckle if fastened on an uneven surface.

Fasten the box to the prepared support using suitably long M8 hexagon head cap screws, inserted in the horizontal and vertical slots (**Fig.12**).

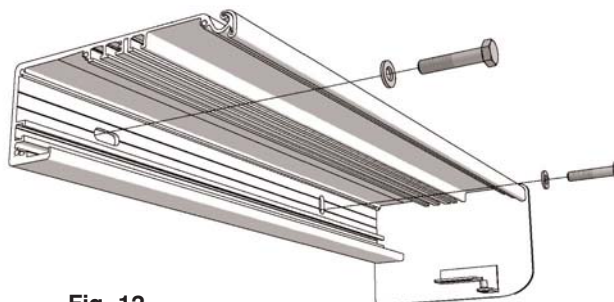


Fig. 12

Installation Instruction

According to the type of support, all or only some of the slots on the box are used (**Fig.13**).
 To prevent vibrations or noise during use, make sure that there is a solid fixture every 600 mm and that the box is fastened with the slots closest to the two heads.

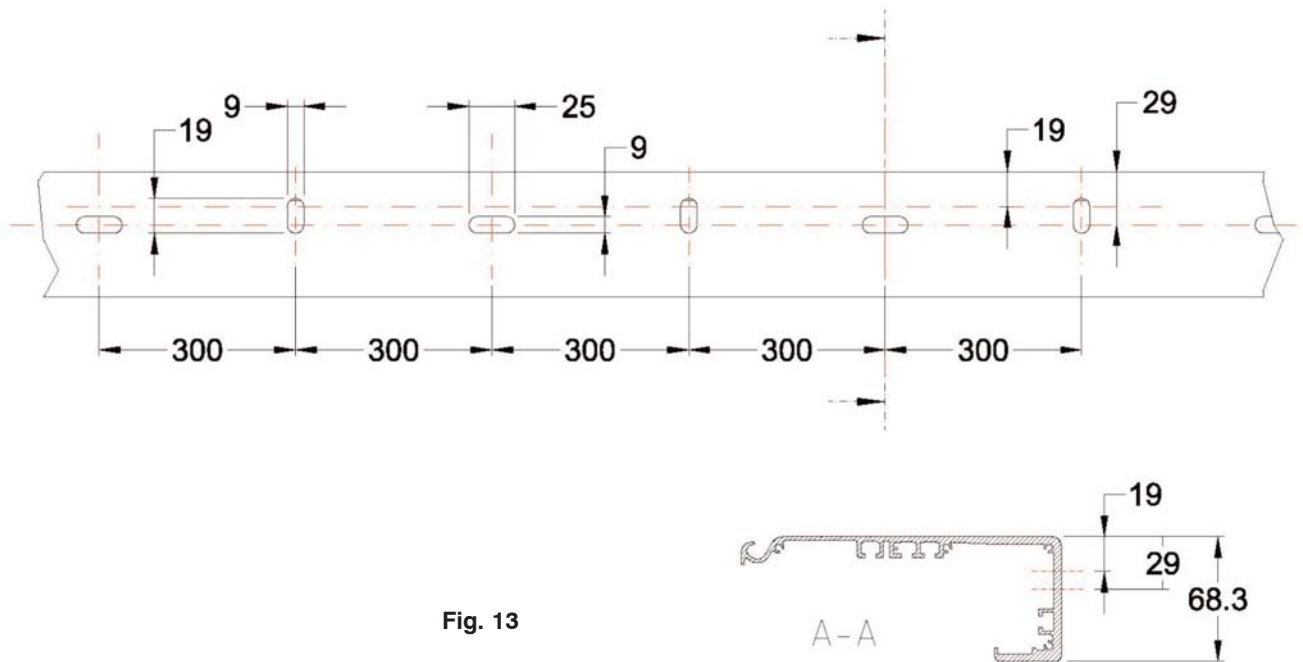


Fig. 13



WARNING

Before completely tightening the screws, make sure that the girder is "level" in both the length and depth directions (**Fig.14**). Positioning errors over the angles indicated in the figure compromise automatism operations.

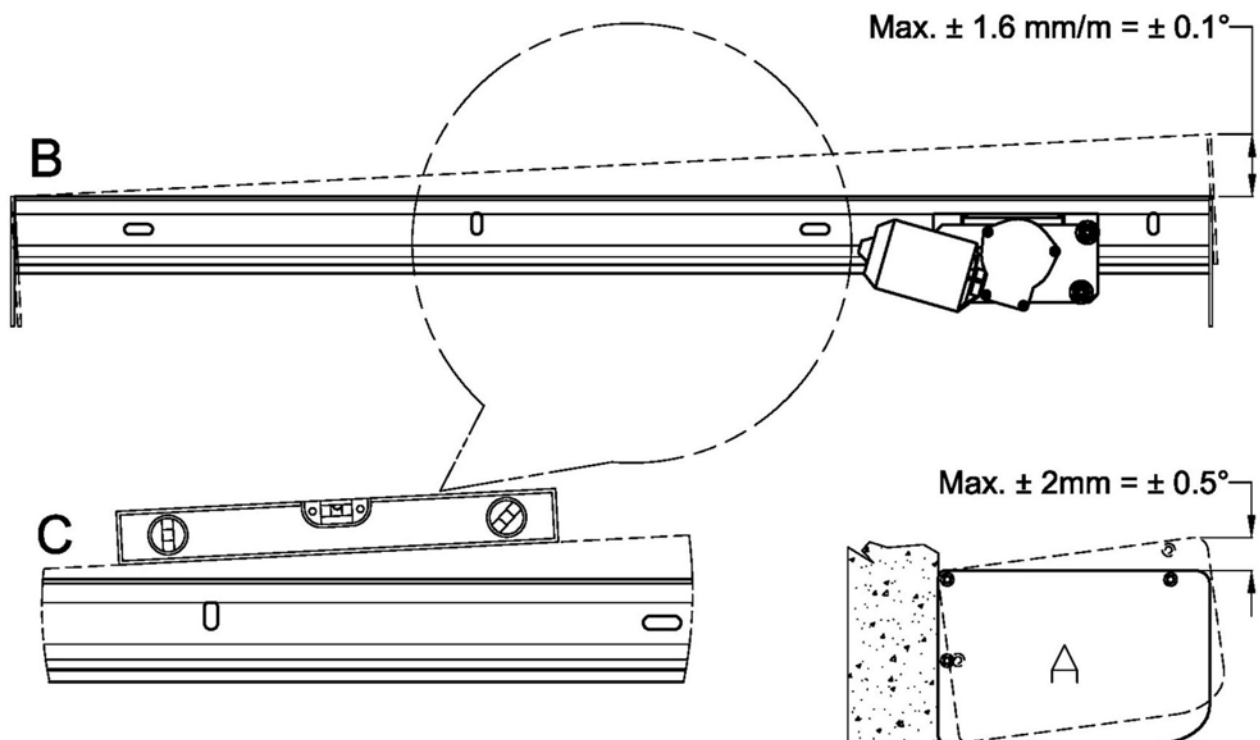


Fig. 14

Wing assembly and adjustment

Carriage assembly

Fasten the carriages to the wings according to the quotas found in the following diagram (Fig.15).

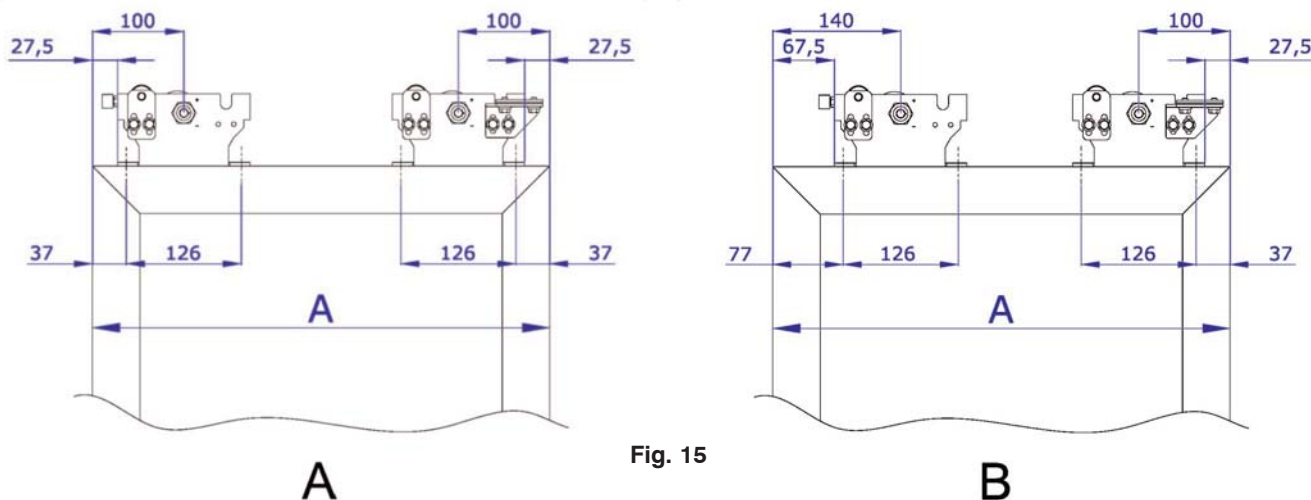


Fig. 15

The quotas indicated in Fig.15 A and B are applied to wings seen from the inspection side (cover) of automatism.

The Fig.15 B is valid only for automatism with only 1 wing shorter than 780 mm, with right or left opening and with electric lock. For all remaining cases (two wings or 1 wings with right or left opening) is refer to Fig.15 A.

NOTE: for wings with antipanic break away system or only glass wing you have to follow the assembling quotas you may find in manual's instructions of those accessories.

Use M8 hexagon head cap screws with flat and notched washers (Fig.16 part.A).

Wing assembly

Make sure that the anti-derailment device is completely lowered by unscrewing the M6 nut (Fig.17, C) and pushing the indicated wheel downwards (Fig.17 Part.C).

Lift the wing and position the carriages on the sliding rail paying attention not to damage the rail.

Wing adjustment

Wing adjustment can be made distinctly on three axes based on installation requirements (Fig.18).

Cross adjustment (Po axis)

Adjust wing position Fig.16 arrow D loosening bolts M8 (Fig.16 part. A) and aligning them to the automatism support surface.

Before tightening bolts A, carefully check that the carriage wheel vertical surface (that coincides with the carriage vertical surface) is parallel to the box (Fig.18).

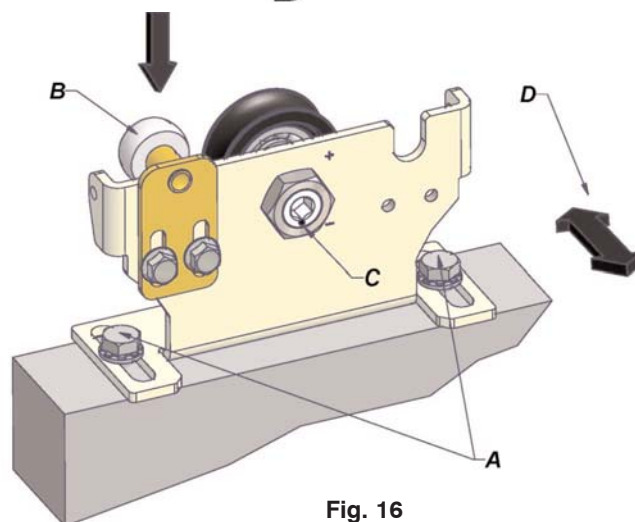


Fig. 16

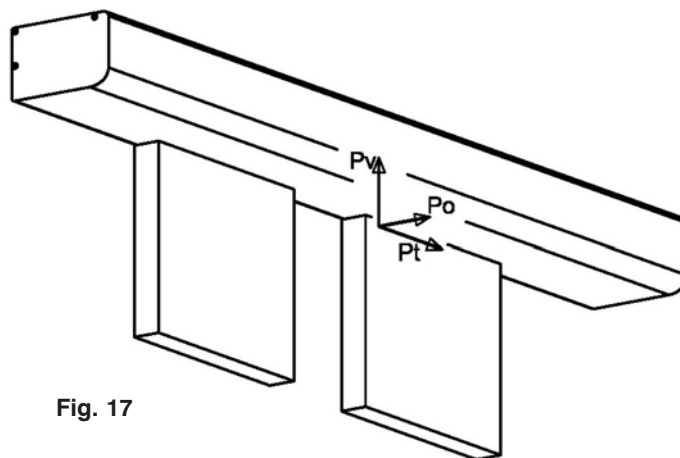


Fig. 17

If uneven proceed as follows:

- Loosen bolts (**Fig.16 part.A**)
- Align the carriages to the automatism box
- Check alignment measuring the quotas E (**Fig.18**) on the right and left sides of the carriage: they must be equal.
- To further test alignment, manually move the wing: it should slide with the minimum effort and without any type of hindrance or friction.
- Tighten the bolts (**Fig.16 part.A**) paying careful attention not to alter the alignment.

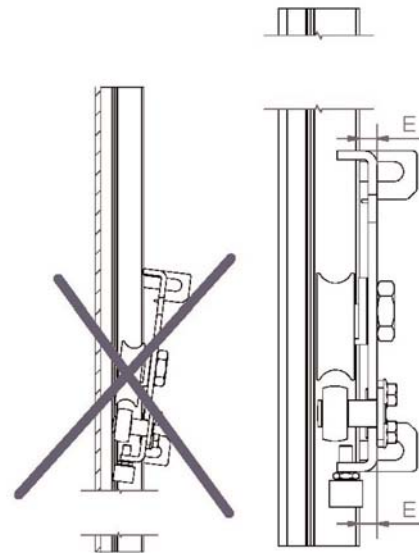


Fig. 18



WARNING

Neglect to align the carriage wheels with the sliding rail may cause excessive wear and noise during automatism use

Vertical adjustment (Pv axis)

To position the wings at the correct height and as perpendicular as possible, proceed as follows:

- To avoid damages, make sure the anti-derailment device is completely lowered.
- Insert a (long-handled) Allen wrench in the wheel eccentric part. **A Fig. 19**,loosen the nut using a long-handled 24 wrench part **B**.
- Use the eccentric to move the wing to the required height using the references (+ and-) on the carriage and on the eccentric part **C**.
- Holding the eccentric securely in position, firmly tighten the wheel nut making sure not to alter the chosen position.

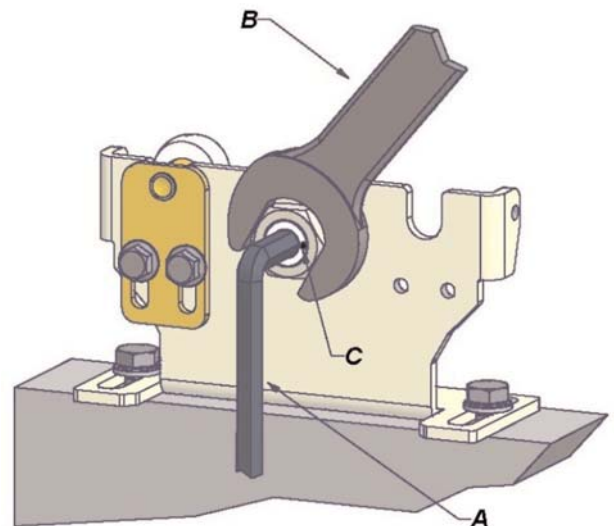


Fig. 19

Horizontal adjustment (Pt axis)

Its purpose is to adjust the meeting point of the two wings. Sesamo automatisms are designed positioning components to obtain the correct meeting of the wings at the centre of the space. If the meeting point requires adjustment during installation, proceed as follows:

- Loosen bolts (**Fig.20**) regarding the clamp on the “passing branch” of the belt (joint-less belt branch)
- Move the clamp on the belt to the required position.
- Firmly tighten the bolt (**Fig.20 part.A**) carefully checking that the belt teeth are correctly inserted in the clamp housings.

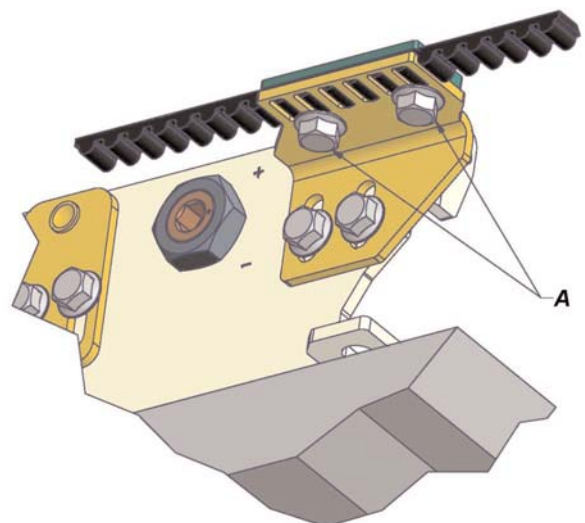


Fig. 20

Belt tensioning

Proceed as follows for correct belt tensioning:

- Make sure the motor unit is positioned and fixed as per factory settings and is a position that guarantees belt centring to the sliding area
- Loosen the fastening nuts on the encoder pulley unit **A** (Fig.21)
- Completely move the tensioning nut back **B**
- Make sure that integrated automatism control module fastening bolt part. **C** is loose and permits lateral movement.
- Move the integrated automatism control module to the left to achieve first belt tensioning level. Make sure that the belt branches are visibly taut (without any evident downward folds).
- Firmly tighten module fastening screws **C** on the automatism girder.
- Rotate the tensioning nut **B** pushing down the spring **D** to the limit **E**
- Tighten the encoder pulley unit fastening nuts **A**

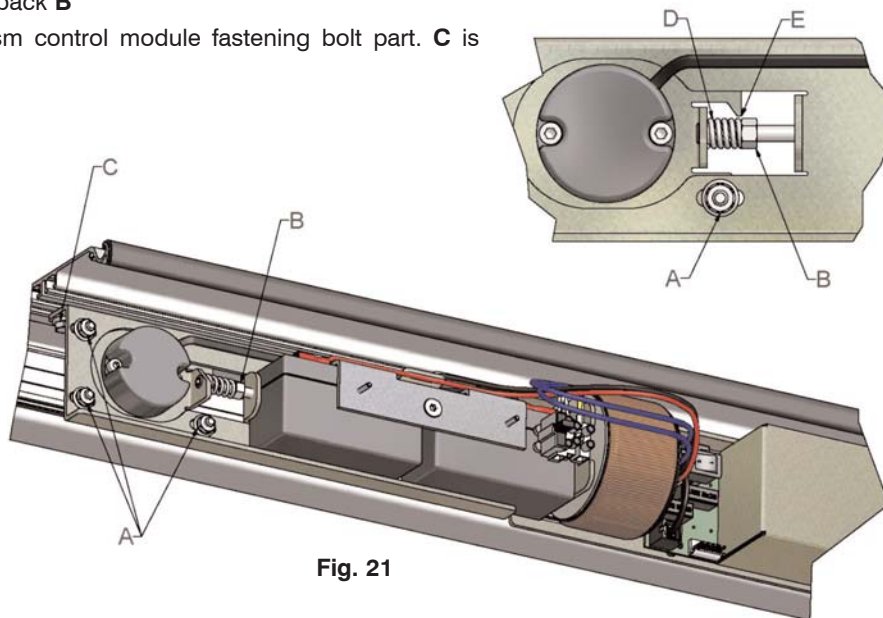


Fig. 21

Carriage start up

Reconnect the belt fasteners to the carriages **Fig.10**; tighten the screws **B** making sure the position of the fasteners permits good belt parallelism between the upper and lower branches.

Verify the correct disposition of the belt fasteners on the carriages in touch with the automatism as indicated in **Fig. 23, 24 and 25**.

Lift the anti-derailment device so that the roller does not touch the aluminium profile during sliding (**Fig.22**). Tighten the screws **C** (**Fig.10**) without altering the chosen adjustment.

In touch with the automatism, verify the correct fixing configuration of the belt clamp on the carriages, as indicate in the figures:

- **Fig. 23** part **C, D** for two wings automatism
- **Fig. 24** part. **C** with 1 wing automatism and left opening
- **Fig. 25** part. **D** with 1 wing automatism and right opening

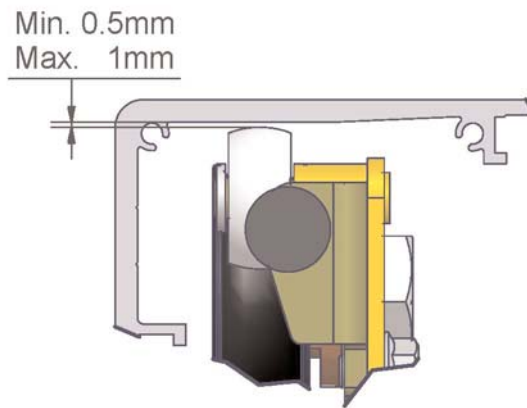


Fig. 22



WARNING

Incorrect anti-derailment device adjustment that puts the roller in contact with the aluminium profile causes excessive noise during automatism use.



WARNING

An incorrect fixing of the belt clamp on the carriages causes alterations in the direction of the opening and closing wings. Verify carefully the agreement of the connections between the belt and the carriages as indicated in the **Fig.25, 26 and 27**.

Wing limit stop adjustment

2 wing Automatism: on of the two limits is found on the left end of the girder (Fig. 23 part. A) and the other near the centre of the right wing (Fig. 23 part.B).

1 wing Automatism: the two limits are found on the ends of the left (Fig. 23, 24 part. A) and right (Fig. 23,24 part. B) sliding area and near the girder heads.

To adjust the limit stops loosen screws as indicated in Fig. 22, 23, 24 part. A,B then slide the limit to the required position and then tighten the screws.

If necessary, fine adjustments of the wing stop point can be made using the carriage rubber screw stop Fig. 22, 23, 24 part. G



WARNING

Before putting the automatism into operation, always make sure that the fastening screws of the stop brackets have been correctly tightened.

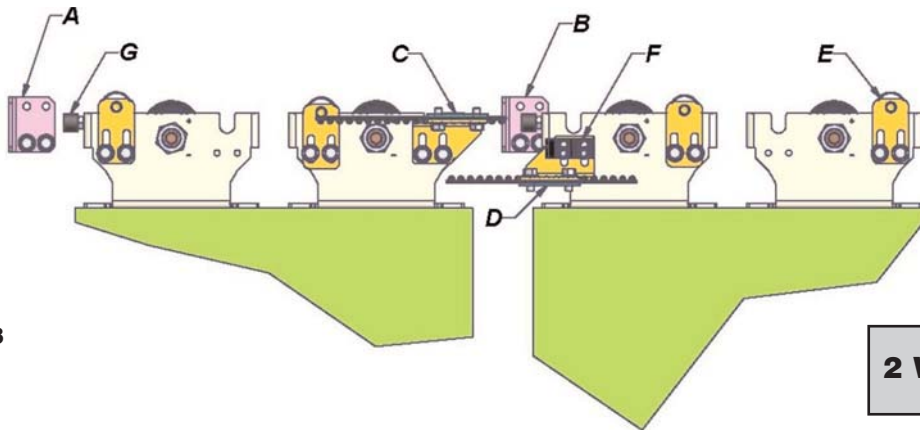


Fig. 23

2 Wings

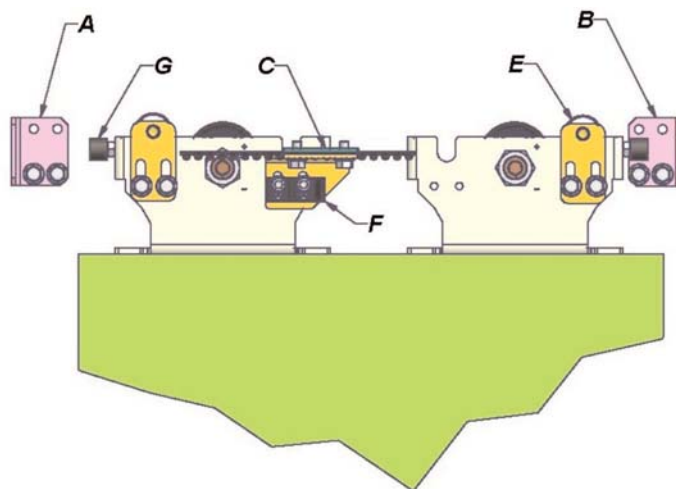


Fig. 24

**1 Wings
Left Opening**

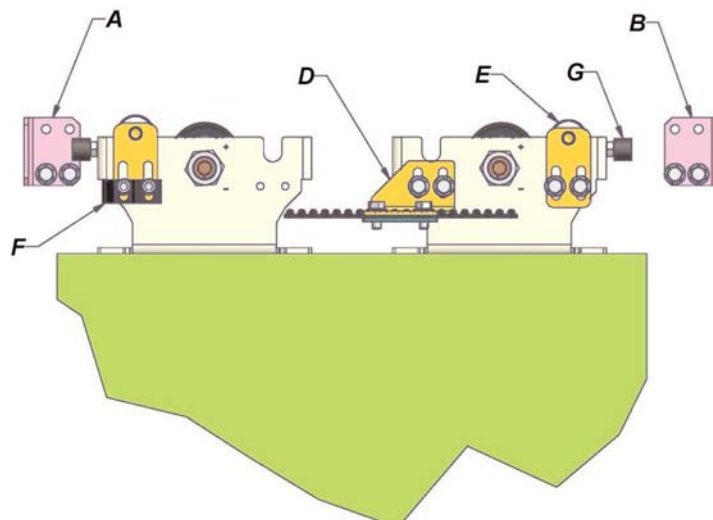


Fig. 25

**1 Wings
Right Opening**

Electronic lock adjustment

- Make sure the limit block runner is evenly positioned on the carriage observing the automatism configuration (Fig.23, 24, 25 part. F).
- Move the wing(s) to the totally closed position.
- Slide the electronic lock until the bar is near the limit block (Fig.26) (distance ~2 mm.) and tighten the screws.
- Drill a hole (ø 9mm) in the automatism cover near the release rod for future key insertion (Fig. 26).

(Hole ø=9mm)

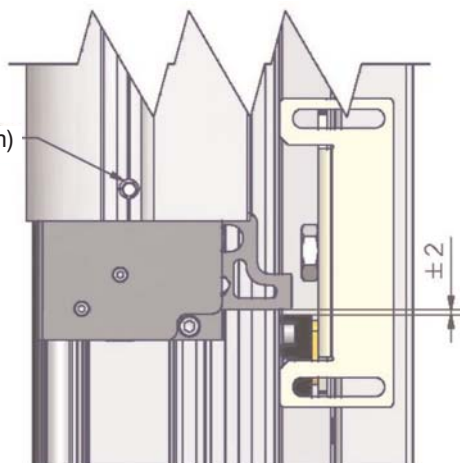


Fig. 26

Manual release

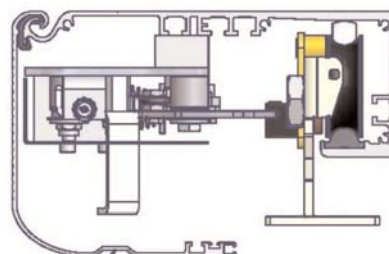
The purpose of the supplied key is to manually activate the electronic lock in the event of power fault or failure.

If its use is required, proceed as follows :

- Insert the provided key in the hole on the part under the automatism cover.
- Turn the key clockwise until mechanical stop and keep it in this position.
- Move the wing ten centimetres towards the opening and remove the key: the wings are now released.

To lock the wings again, move them to the completely closed position.

(Hole ø=9mm)



Final operations

Before starting the automatism, check and perform the following:

- Accurately remove and dust or shavings from the rails and carriage wheels
- Check correct tightening of the carriage wheel screws and nuts.
- Check correct belt tensioning.
- Check that the wires are fixed and that no wire pass near the carriage sliding area.
- Check that the limit stops are correctly positioned and that the belt clamps do not touch the toothed pulleys.
- Spread a thin layer of common bearing grease on the rails and transmission belt.
- Verify the plastic joint in the gear motor system is properly lubricated with normal grease for bearings.



WARNING

The rails and transmission belt can work without lubrication without presenting wear. However, light lubrication prevents noise when parts are not perfectly aligned.

Power connections



WARNING

Before performing the following operations make sure the mains are disconnected. Before powering the equipment, perform the controls foreseen in paragraph “Start up”.

Place the power cord in the automatism paying careful attention not to damage the cord against any metallic edges. Connect mains and grounding wires on the terminal board (Fig. 27)

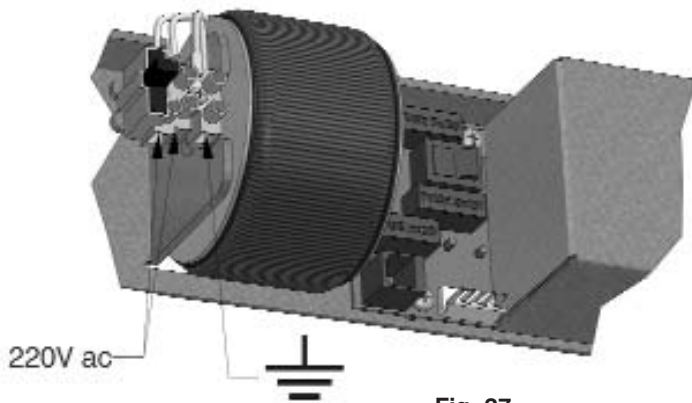


Fig. 27



WARNING

Never invert the power wire with the grounding wire. Do not replace the mains fuse with a fuse other than the one foreseen by the manufacturer: T 1 A (delayed).

Power must be isolatable from the general panel with a bi-polar switch with minimum contact opening equal to 3 mm. (not supplied).

MILLENNIUM electronic board

The meanings of the main electronic board components are listed in Fig. 28:

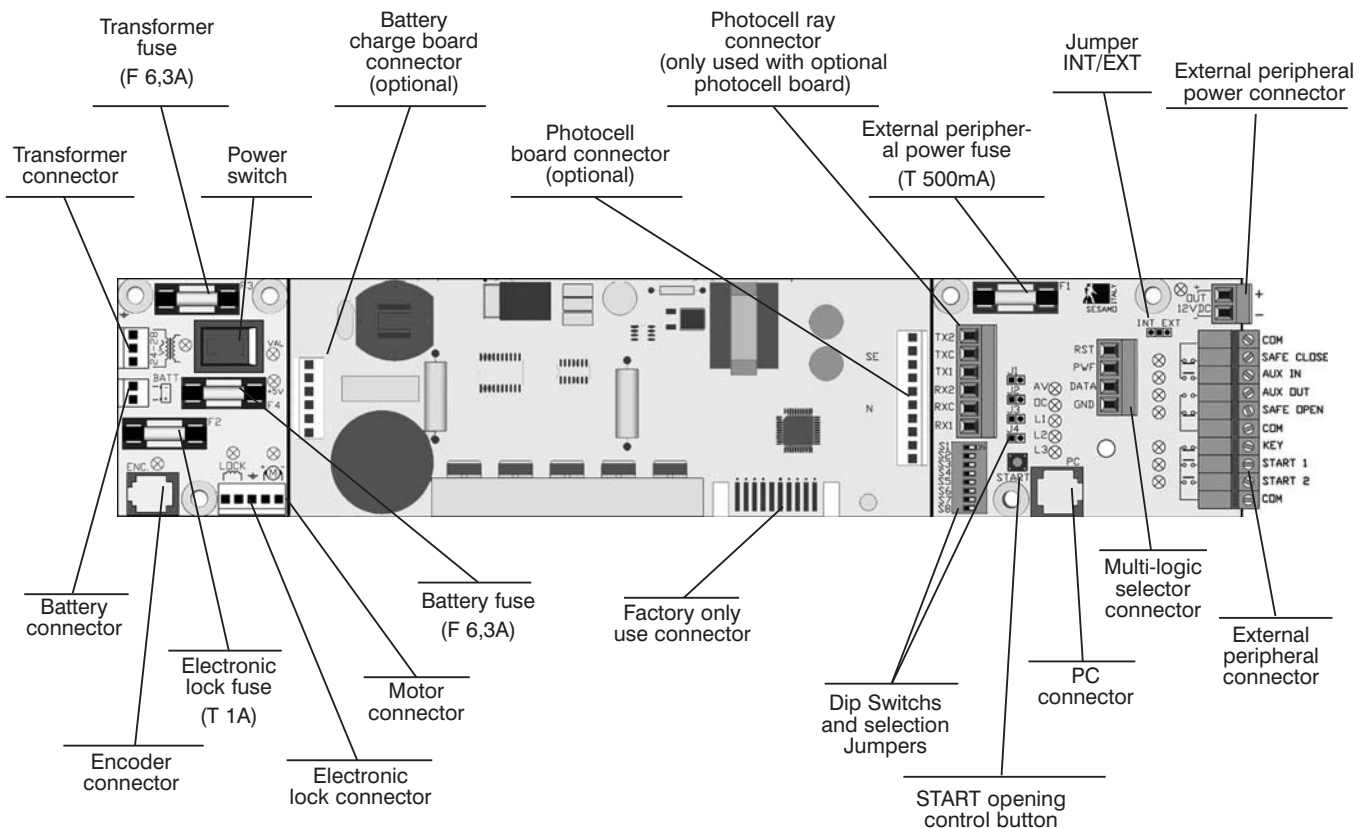


Fig. 28

Electrical connections



WARNING

All board or peripheral connections on the terminal board must be performed with the power disconnected to prevent irreparable damage to the electronic equipment.



WARNING

Any repairs or replacements must be performed by professionally qualified personnel and original spare parts must be used in repairs.



Connectors must be inserted as in Fig. 29

Fig. 29

Connections

Fig. 30 summarises terminal connections on the left side of the electronic board:

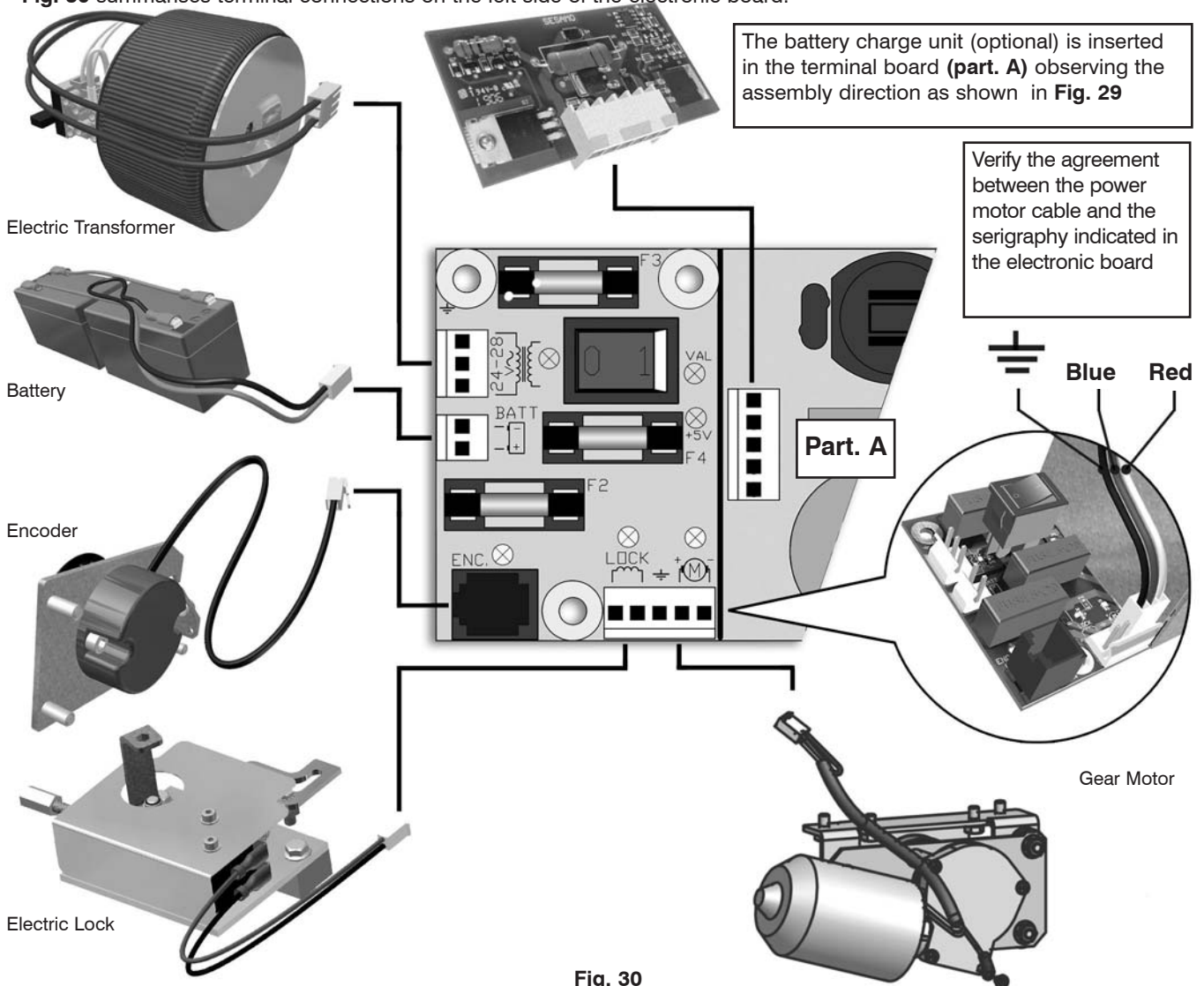


Fig. 30

Right Side Electronic Board Connections

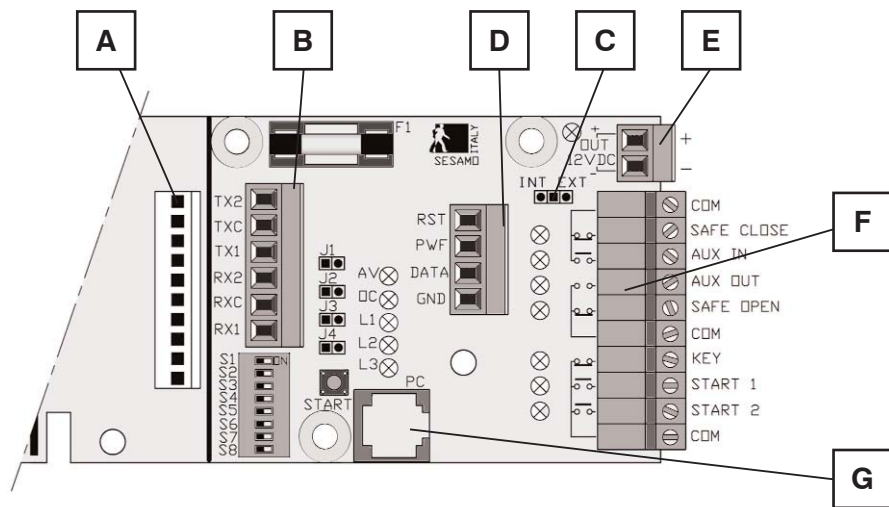


Fig. 31

A. Photocell amplifier board connector (optional)

Insert the amplifier module observing the assembly direction shown in Fig. 29



WARNING

Select the Jumper for single or double beam and check the red led

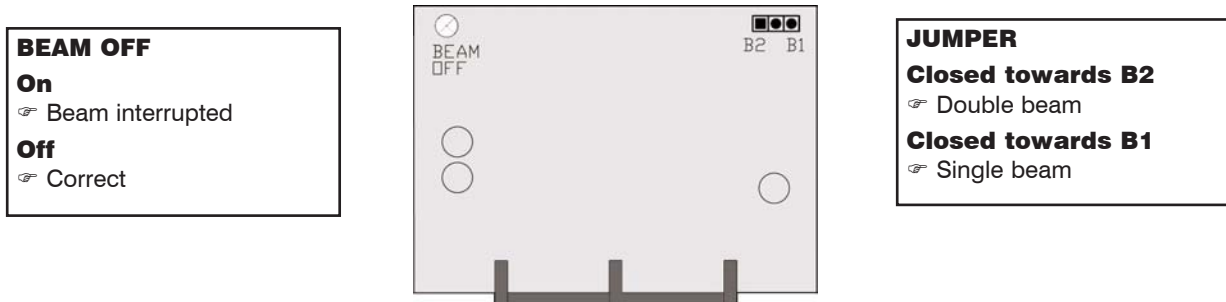


Fig. 32

B. Photocell beam connector

(only use if the internal photocell amplifier board module is installed)

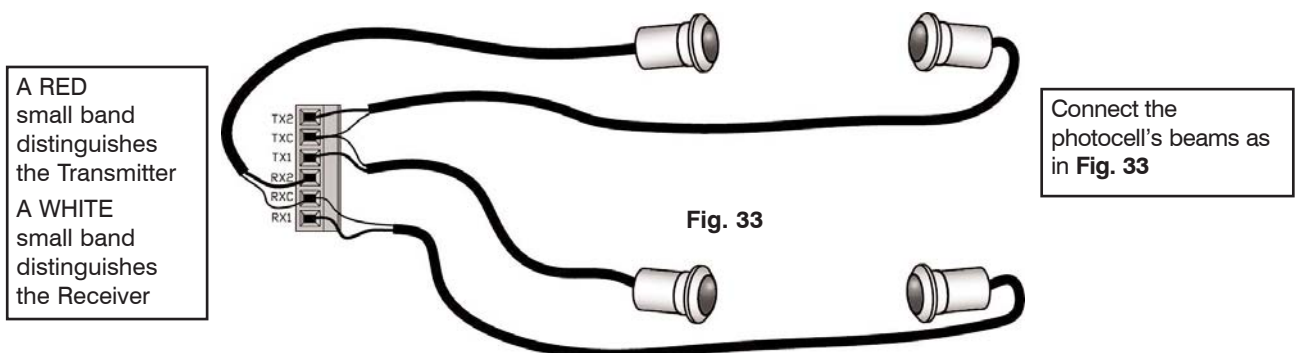
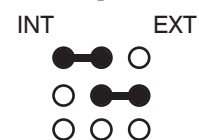


Fig. 33

C. Selector Jumper between Millenium - and external cell amplifier

The system has three selectable working models:

- | | | |
|---|-------------------------------------|--------------------------|
| A | Millenium amplifier only | Jumper close towards INT |
| B | External amplifier only | Jumper close towards EXT |
| C | Both Millenium + External amplifier | Jumper open |



D. Multi-logic selector connector

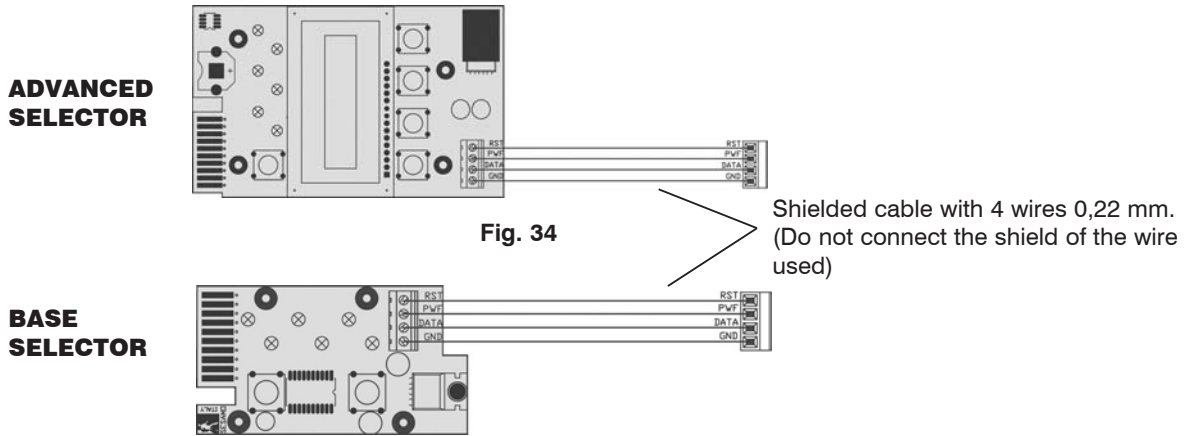


Fig. 34

Fig. 35

Use the four conductors in the shielded wire for connections, observing the correspondences indicated by the markings on the terminal board and multi-logic selector.

Do not connect the shield of the wire used.

For further information on multi-logic selector use, see the instructions for use.

E. External peripheral power connector – 12 Vdc 6W max (500mA)

Real power value may vary from 12 Vdc to about 15 Vdc depending on the resistive load situations connected to these terminals.



WARNING

Do not invert power polarity. When the green led D39 is on it indicates normal voltage presence 12V. If off check:

- For mains and/or battery voltage
- That fuse F1 is not interrupted

F. External peripheral connector

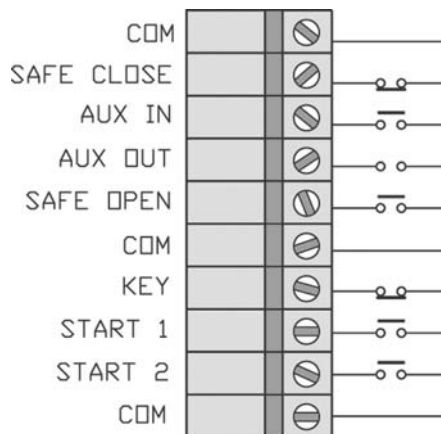


Fig. 36

SIGNAL	TYPE*	DESCRIPTION	FUNCTION
COM		Common electrical signal.	
SAFE CLOSE	NC	Signal for the connection of an external photocell or safety control device for wing closing	If the door is closing and the contact opens, the unit sends an immediate motion inversion command. Closing will only recommence after the contact closes. The signal must be short circuited with COM if not devices (internal or external) are connected.
AUX IN	NA	Auxiliary input signal. Auxiliary devices can be connected to this signal. It is normally used for inter lock functions.	When used as an auxiliary signal the function logic can be personalised according to customer requests. When used as inter lock logic, closing this signal inhibits door functions that will not open even with open signal presence.
AUX OUT		Auxiliary output signal, PNP transistor type for particular door condition signals (reset, open, closed, etc).	According to the type chosen signal, the output becomes active (12Vdc and led on) when the door is in the set condition (Reset, open, closed, etc). See the advanced selector manual for further details.
SAFE OPEN	NA	Signal for the connection of sensors for protection during wing opening.	If the door is opening and the contact closes, the unit sends an immediate movement stop command. Opening will only continue after this signal is deactivated.
KEY	NC	Lock signal. Closure devices can be connected such as electronic key, key selector, transponder, etc. The signal can be controlled in bi or mono-stabile mode with an activation time equal to about 500 msec. For mode type selection see paragraph JUMPERS.	If the signal opens the unit sends a complete wing closure command (from any position) From this moment until the signal is closed the door stays in this position and no external peripheral is detected (including multi-logic selectors). As soon as the signal closes the door opens permitting access. The signal must be short circuited with COM if no devices are connected.
START 1	NA	Opening signal. Wing opening devices can be connected.	Closing this signals causes the wings to open. This signal is only monitored in 2 Radar logic.
START2	NA	Opening signal. Wing opening devices can be connected.	Closing this signals causes the wings to open. This signal is monitored in both 2 Radar and 1 Radar logic.

* NA = Normally open NC = Normally closed

The electrical signal from external peripherals can be varied through the advanced selector or PC connection: from normally closed to normally open and vice versa. See the advanced selector used manual for further details.

G. Connector for PC - unit connections

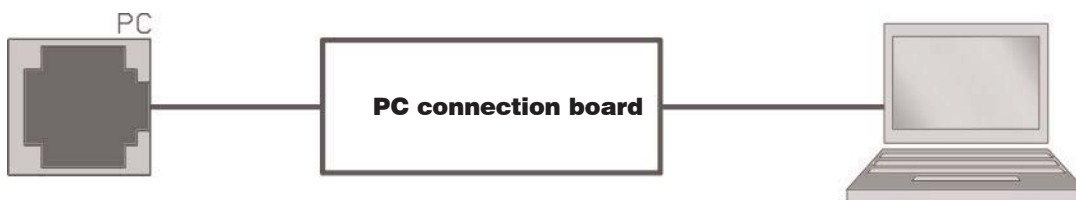


Fig. 37

A PC connection board (optional) is required to connect the MILLENNIUM unit to a Personal Computer. The following is possible with MILLENNIUMWARE software:

- Advanced adjustments of some operating parameters
- Diagnostics and advanced information on unit status
- Microprocessor programming

LED Functions

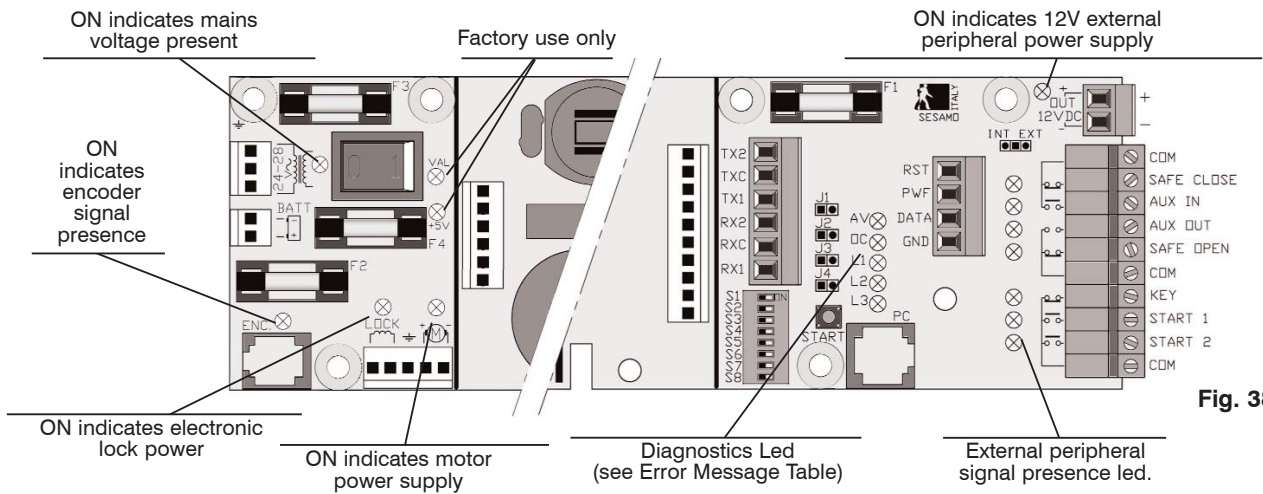


Fig. 38

Dip Switch - Selections



WARNING

For correct automatism functions and to guarantee the optimisation of the parameters that regulate wing movement, adjust wing weight using dip switches S1 and S2 as indicated below.



N° Wings	Weight per wing (kg)
2	30 ÷ 60
1	60 ÷ 120



N° Wings	Weight per wing (kg)
2	0 ÷ 30
1	0 ÷ 60



N° Wings	Weight per wing (kg)
2	60 ÷ 80

Semi-automatic mode



Semi-automatic mode enabled. In this mode wings close similar to how they open, it doesn't start automatically but must be controlled by the operator.



Semi-automatic mode disabled (Default). In this mode the closing's wings starts automatically after a time according to the idle time's setting.

Battery mode







In the event of power failure the equipment continues working powered by the battery. (Default).



In the event of power failure, the equipment moves the doors to the "Stop open" position, and stays in this condition until power returns or a new logic is selected using the multi-logic selector.

Jumpers

-  **J1:** activates motor power supply in completely closed position to generate continual drive even in the wings stopped and closed position.
-  **J2:** not used
-  **J3:** cyclic opening generator to test door operations;
-  **J4:** KEY signal operating type selection (see external peripheral connector description): mono-stable (Activation time 500 ms) or bi-stable

Jumpers	ON	OFF (Default)
J1	Power on	Power off
J2	Not used	Not used
J3	Cyclic opening	No cyclic opening
J4	Mono-stable	Bi-stable

Start up



WARNING

If no optional operation lock device is installed, make sure the KEY input is short circuited with the COM input. Otherwise the equipment cannot be started.

If no safe close device (internal and external) is installed, make sure the SAFE CLOSE input is short circuited with the COM input and the jumper INT/EXT (Part. C pag. 17) in EXT. Otherwise the equipment cannot be started.



WARNING

For correct automatism functions and to guarantee the optimisation of the parameters that regulate wing movement, adjust wing weight using dip switches **S1** and **S2** as previously indicated.

Position wings ~20 cm from total closure. Turn the power switch to 1 to power the equipment.

The automatism resets limits to reduced speed first completely opening and then closing.



WARNING

If necessary, make a dynamometric control to verify any slide friction, turn off the equipment and remove the gear motor unscrewing the specific rubber supports.

Eliminate friction causes and start the equipment again repeating the above-described movement.

Multi-logic selector not installed: when the equipment finishes limit reset it is ready to work in 2 RADAR logic.

Multi-logic selector installed: when the equipment finishes limit reset it is ready to work and is positioned in the "STOP CLOSED" logic.

At the end of reset the equipment is ready for use; check correct sensor operations for opening command and safety control. Also check anti-crushing sensitivity; if the value requires increasing and decreasing, see the advanced selector manual.

To test automatism operations without connections to the open command device use the START button on the unit (see Fig. 28)

Inter lock connection and use

The MILLENNIUM unit is set to work in inter lock mode through connections to an electronic unit of the same family.

In inter lock mode one door can only open if the other is not moving, that is, if not in the movement phase.

To inter lock two automatism proceed as follows (**Fig. 39**):

- connect the terminal AUX IN of unit A to the terminal AUX OUT of unit B
- connect the terminal AUX OUT of unit A to the terminal AUX IN of unit B
- connect terminal “-” of the 12Vdc power supply of unit A to the terminal “-” of the 12Vdc power supply of unit B.

Use 4 x 0.22 shielded wire for connections and do not connect the shield.

When open requests come from the both sensors on both doors an opening priority needs to be set; to do this, set one door as MASTER and the other as SLAVE.

When simultaneous signals occur, the MASTER door will open.

To select MASTER and SLAVE use the advanced selector.

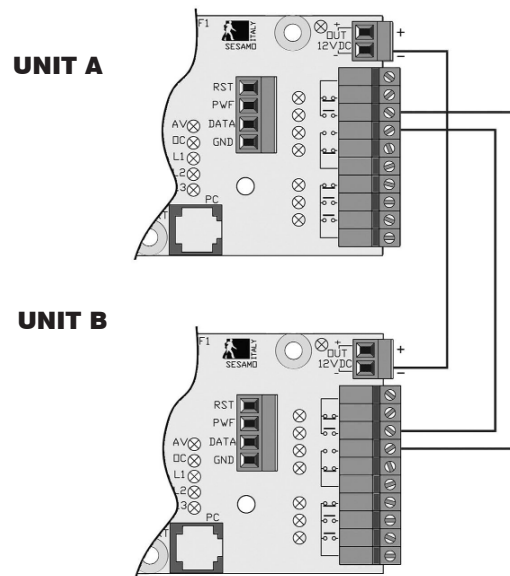


Fig. 39

Error Message Table

DESCRIPTION	NUM.	LED			WHAT TO DO		
		AV	OC	L1	L2	L3	
Initialization error	1	BL.	OFF	OFF	OFF	ON	An error occurred during initialisation, in particular, the measured opening quota is too low. Check the encoder, the connection between the encoder and mother boards. Make sure the transit area is free of obstacles. In the event of electronic lock, check correct operations.
Door blocked error	2	BL.	OFF	OFF	ON	OFF	The door cannot open. Make sure there are no obstacles in the transit area and that there are no locks (electric or manual) that block the door.
Anti-crushing in opening error	3	BL.	OFF	OFF	ON	ON	After three opening and anti-crushing detection attempts. Make sure there are no obstacles in the transit area. Make sure that the anti-crushing sensitivity in opening is not too low. Check the encoder, the connection between the encoder and mother boards.
Anti-crushing in closing error	4	BL.	OFF	ON	OFF	OFF	After three closing and anti-crushing detection attempts. Make sure there are no obstacles in the transit area. Make sure that the anti-crushing sensitivity in opening is not too low. Check the encoder, the connection between the encoder and mother boards.
Inversion error	5	BL.	OFF	ON	OFF	ON	An inversion error of the movement between the encoder and motor was detected. Make sure that the motor is correctly connected as shown in Fig. 30
Overcurrent error	6	BL.	ON	ON	ON	OFF	Motor overload detected. Make sure there are no short circuits on the motor power cord. Check the motor and replace if necessary.
Encoder error	7	BL.	OFF	ON	ON	ON	Encoder malfunction detected. Check the encoder, the connection between the encoder and mother boards.

BL. = Blinking

Delivery Modality

Close the automatism’s cover following the reverse procedure used to remove it.

Make sure the two fixing screws of the cover are well tightened.

Before to end the automatism’s installation, remember to stick the labels on the sliding wings.

Hand the guarantee and test certificate over filled according to the instructions shown in the certificate.

The certificates must be sent to SESAMO in 8 days from the positive test date. Hand the technical documentations over to the client.

LIGHT
MILLENNIUM



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