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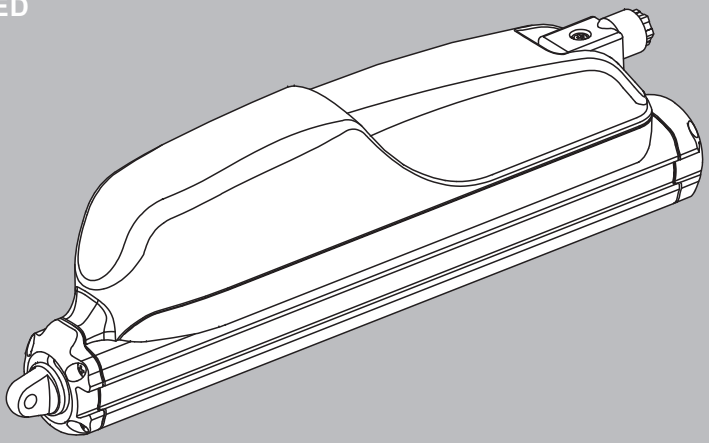
EN

INSTALLATION AND USE INSTRUCTIONS

ROD ACTUATOR FOR WINDOWS AUTOMATION

SL60

PATENTED



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BEFORE INSTALLING AND USING THE ACTUATOR, IT IS COMPULSORY FOR THE INSTALLER AND THE USER TO READ AND UNDERSTAND THIS MANUAL IN ALL ITS PARTS.

THIS MANUAL IS INTEGRAL PART OF THE ACTUATOR AND MUST BE PRESERVED FOR FUTURE REFERENCE UNTIL DEMOLITION OF THE SAME.

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ORIGINAL

The undersigned, in the name of and behalf of the following company

Topp S.r.l.
Via Galvani, 59
36066 Sandrigo (VI)
Italia

herewith declares that the person authorised to compile the technical file is
Name: Bettiati Roberto - Topp S.r.l.
Address: via Galvani,59 36066 Sandrigo (VI)

and that to the partly completed machinery

ROD ACTUATOR FOR WINDOWS AUTOMATION

Type: ***SL60***
Model: ***SL60H - SL60L***

the following essential requisites of the
2006/42/EC Machinery Directive (including all applicable amendments)
have been applied and fulfilled: Enclosure I: 1.5.1; 1.5.2; 1.5.10; 1.5.11
that the relevant technical documentation is compiled in accordance with part B of Annex VII of the above mentioned Machinery Directive..

The above identified partly completed machinery is also in conformity with the all the relevant provisions of the following directives (including all applicable amendments)
EMC Directive 2014/30/EU
RoHS II Directive 2011/65/EU

The following harmonised standards have been applied:
EN 60335-2-103:2015 *(applicable parts)*
EN 55014-1:2006 + A1:2009 + A2:2011
EN 55014-2:2015
EN 61000-6-2:2005.
EN 61000-6-3:2007 + A1:2011 + AC:2012.
EN 50581:2012
and the following technical documents:
EN 62233:2008

The undersigned also undertakes the obligation, in response to a duly reasoned request by the national market surveillance authorities, to transmit to the a.m. authorities, in electronic or paper format, the relevant technical documentation on the partly completed machinery.
The above identified partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of the above mentioned Machinery Directive.
This declaration of conformity is issued under the sole responsibility of the manufacturer.

Date: *Sandrigo01/02/2018*

Signature: *Matteo Cavalcante*
Amministratore .....

2.1- GENERAL INSTRUCTIONS

BEFORE INSTALLING AND USING THE ACTUATOR, IT IS COMPULSORY FOR THE INSTALLER AND THE USER TO READ AND UNDERSTAND THIS MANUAL IN ALL ITS PARTS.

THIS MANUAL IS INTEGRAL PART OF THE ACTUATOR AND MUST COMPULSORILY BE PRESERVED FOR FUTURE REFERENCE.

THE MANUFACTURER HAS NO LIABILITY FOR ANY EVENTUAL DAMAGE TO PERSONS, ANIMALS AND THINGS DUE TO THE INOBSERVANCE OF THE PRESCRIPTIONS DESCRIBED IN THIS MANUAL.

IN ORDER FOR THE AUTOMATION UNIT TO OPERATE CORRECTLY, WE RECOMMEND CARRYING OUT PERIODICAL MAINTENANCE ON IT, AS INDICATED IN PAR. 7.1 OF THIS MANUAL.

THE WARRANTY ON THE ACTUATOR WILL NOT BE HONORED IF PRODUCT IS NOT INSTALLED AND USED ACCORDING TO THE INSTRUCTIONS PROVIDED AND THE REGULATIONS SHOWN IN THIS INSTRUCTION MANUAL AND IF IT IS USED WITH NON-GENUINE PARTS, ACCESSORIES, SPARE PARTS AND/OR CONTROL/FEEDING UNITS.

2.2- INSTALLER AND USER

THE ACTUATOR INSTALLATION CAN BE PERFORMED EXCLUSIVELY BY COMPETENT AND QUALIFIED TECHNICAL PERSONNEL SATISFYING THE PROFESSIONAL AND TECHNICAL REQUIREMENTS FORESEEN BY THE LAWS IN FORCE IN THE COUNTRY OF INSTALLATION.

THE INSTALLATION TECHNICIAN SHALL ACCEPT FULL RESPONSIBILITY FOR ANY INSTALLATION ERRORS AND FOR ANY FAILURE TO ADHERE TO THE INSTRUCTIONS PROVIDED IN THIS MANUAL. THE INSTALLATION TECHNICIAN SHALL THEREFORE BE EXCLUSIVELY LIABLE FOR ANY DAMAGES CAUSED TO USERS AND/OR THIRD PARTIES THAT MAY ARISE AS A RESULT OF INCORRECT INSTALLATION.

THE ACTUATOR CAN BE USED EXCLUSIVELY BY AN USER ACTING IN COMPLIANCE WITH THE INSTRUCTIONS CONTAINED IN THIS MANUAL AND/OR IN THE MANUAL OF THE ACTUATOR CONTROL DEVICE (e.g.: CONTROL UNIT).

2.3- TECHNICAL ASSISTANCE

Contact the installation technician or retailer for assistance.

2.4- RESERVED RIGHTS

The reserved rights on this manual "Installation and use instructions" remain property of the Manufacturer.
Each information herein contained (text, drawings, diagrams, etc.) is reserved.
None part of this manual can be reproduced and disclosed (totally or partially) by any reproduction means (photocopies, microfilms or other) without written authorization of the Manufacturer.

2.5- DESCRIPTION OF PERSONNEL

USERS MUST NEVER PERFORM OPERATIONS RESERVED FOR MAINTENANCE PEOPLE OR SPECIALISED TECHNICIANS. THE MANUFACTURER DECLINES ALL LIABILITY FOR DAMAGE DERIVING FROM FAILURE TO OBSERVE THE ABOVE REQUIREMENTS.

Specialised electrician:
A specialised electrician must be able to install the actuator, start it and operate it both in normal conditions and in the maintenance mode; he/she is qualified to perform all electrical and mechanical adjustment and maintenance operations. He/she is allowed to work on live electrical cabinets and junction boxes.

User:
specialised person capable of operating the actuator under normal conditions by using the relative controls. He/she must also be able to operate with the actuator under “maintenance” in order to perform simple routine maintenance operations (cleaning), and start or reset the actuator following an unscheduled stop.

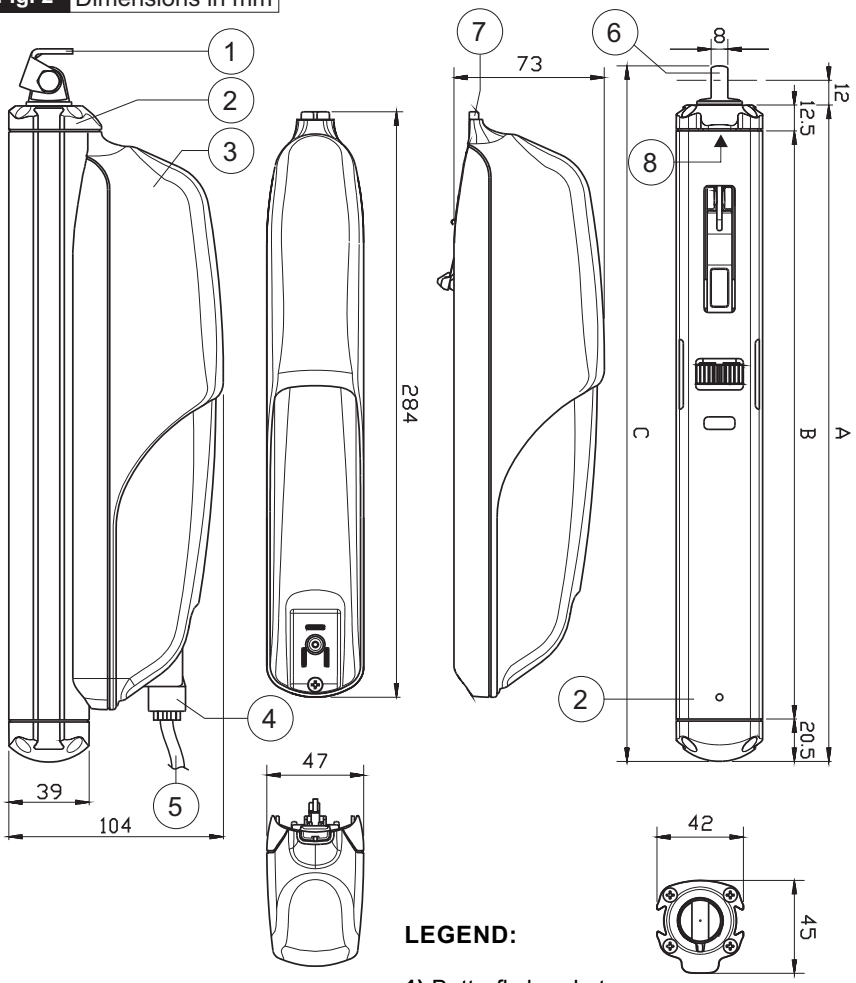
3.1- RATING PLATE AND "CE" MARKING

The "CE" marking certifies the compliance of the machine with the essential safety and health requirements foreseen by the product European Directives.
The rating plate is an adhesive plate in polyester, silk-screen printed in black, having the following size: L= 50 mm - H= 36 mm.
It is applied externally on the actuator. The plate bears in readable and indelible way the following data:

- logo and address of the manufacturer
- type and model
- voltage and intensity of power supply (V - A)
- absorbed electric power P (W)
- thrust force F (N)
- type of service S_2 (min)
- idle translation speed (mm/s)
- protection degree (IP)
- "CE" marking
- symbol of “WEEE” Directive 2002/96/CE
- symbol of double insulation (only for mod. SL60H)
- serial number

3.2- DENOMINATION OF THE COMPONENTS AND DIMENSIONS

Fig. 2 Dimensions in mm



Stroke	A	B	C
180	318	285	337
230	368	335	387
350	488	455	507
550	688	655	707
750	888	855	907

LEGEND:

1) Butterfly bracket
2) Actuator
3) Motor
4) Connector
5) Power supply cable
6) Rod head
7) Motor coupling
8) Motor coupling seat

3.3- TECHNICAL DATA

Tab. 1 contains the technical data characterising the actuators.

	SL60H	SL60L
Power supply voltage	230 V - 50 Hz	24 V ⎓
Absorbed current	0,33 A	1,35 A
Absorbed power with load	65 W	34 W
Thrust force	600 N	
Tractive force	450 N	500 N
Idle translation speed	12 mm/s	7 mm/s
Duration of the idle stroke	as a function of the stroke	
Minimum window frame height [1]	H = 800 mm	
Stroke	18 - 23 - 35 - 55 - 75 cm	
Protection against electric shocks	Class II	Class III
Type of service S_2 [2]	3 min	3 min
Operating temperature	- 5 ºC + 50 ºC	
Protection degree of electric devices	IP 55	
Adjustment of the window frame connection	NO	
Parallel electric connection of more actuators on the same window	NO	
Parallel electric connection of more actuators on different windows	YES (see wiring diagram)	
Actuator weight with brackets	1,7 kg	
Gross weight	1,9 kg	

[1] Actuator distance from the window frame opening hinge
[2] Service of limited duration according to EN 60034

3.4- FORMULAS FOR THE CALCULATION OF THRUST FORCE OR TRACTIVE FORCE

Fig. 3

Horizontal domes or skylights

$F_{(N)}$= Force necessary for opening or closing
$P_{(N)}$= Weight of the skylight or dome
(Only movable part)

$$F = 0{,}54 \times P$$

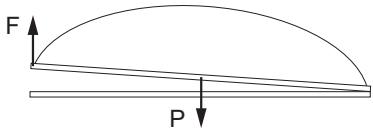
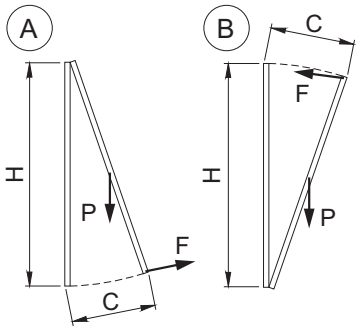


Fig. 4

Top hung windows (A)
Or botton hung windows (B)

$F_{(N)}$= Force necessary for opening or closing
$P_{(N)}$= Weight of the window (only movable part)
$C_{(mm)}$= Window opening stroke
$H_{(mm)}$= Window height

$$F = (0{,}54 \times P) \times \left(\frac{C}{H}\right)$$



3.5- DESTINATION OF USE

THE ACTUATOR HAS BEEN DESIGNED AND MANUFACTURED TO PERFORM , BY MEANS OF A CONTROL DEVICE, THE OPENING AND CLOSING OF TOP HUNG WINDOWS, PIVOT WINDOWS, JALOUSIE WINDOW, AND SKYLIGHTS.

3.6- USE LIMITS

The actuator has been designed and manufactured exclusively for the destination of use given in **par. 3.5**, therefore, any other type of use is strictly forbidden in order to assure in any moment the safety of the installer and of the user, as well as the efficiency of the actuator itself.
Check carefully all environmental conditions (temperature, humidity, wind, snow, potential chemical agents, etc.) and installation settings (misaligned fitting of brackets and attachment to the frame, frictions produced by hinges or gaskets, use of self-balancing window stays, etc.) it is recommended that they not exceed the actuator performances shown in the technical table. If they do, please find an alternative and more suitable product for your application.

IT IS STRICTLY FORBIDDEN TO USE THE ACTUATOR FOR IMPROPER USES OTHER THAN THE ONE FORESEEN BY THE MANUFACTURER (SEE PAR. 3.5).

IT IS STRICTLY FORBIDDEN TO INSTALL THE ACTUATOR ON THE EXTERNAL SIDE OF THE WINDOW FRAME SUBJECT TO ATMOSPHERIC AGENTS (RAIN, SNOW, ETC.).

THE USE OF THE ACTUATOR IN ENVIRONMENTS WITH POTENTIALLY EXPLOSIVE ATMOSPHERE IS STRICTLY FORBIDDEN.

IT IS COMPULSORY TO KEEP THE PACKAGE AND THE ACTUATOR OUT OF REACH OF CHILDREN.

3.7- PACKAGE

Each standard package of the product (cardboard box) contains **(Fig. 5)**:

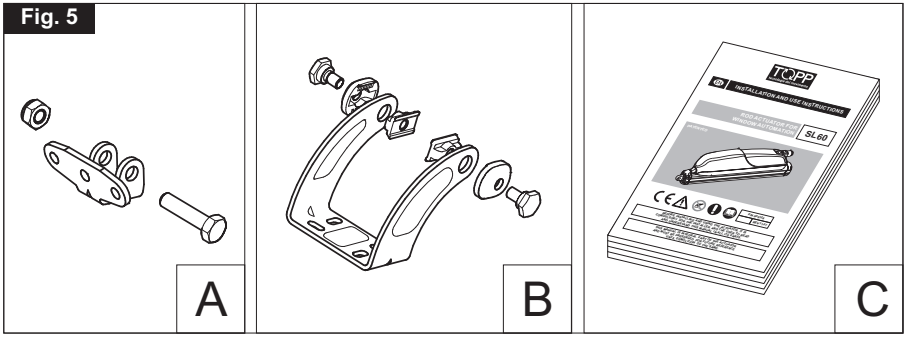
- No. 1 Actuator equipped with power supply cable;
- No. 1 Butterfly bracket kit **(Ref. A)** equipped with screw and nut;
- No. 1 Actuator support bracket kit **(Ref. B)** equipped with screw and nut;
- Package of fastening screws for window frames in aluminium;
- No. 1 Installation and use instructions **(Ref. C)**;
- No.1 Safety Plate **(Fig. 6).**

MAKE SURE THAT THE ABOVE DESCRIBED COMPONENTS ARE CONTAINED IN THE PACKAGE, AS WELL AS THAT THE ACTUATOR HAS NOT BEEN DAMAGED DURING TRANSPORT.

SHOULD ANY ANOMALY BE DETECTED, IT IS FORBIDDEN TO INSTALL THE ACTUATOR, AND IT IS COMPULSORY TO REQUIRE TECHNICAL ASSISTANCE FROM YOUR DEALER OR THE MANUFACTURER.

THE PACKAGING (PAPER, PLASTIC, ETC.) HAS TO BE DISPOSED ACCORDING TO THE LAWS IN FORCE.

Fig. 5



4.1- GENERAL INSTRUCTIONS

OPERATORS MUST BE INFORMED OF ACCIDENT RISKS, SAFETY DEVICES AND THE GENERAL ACCIDENT PREVENTION REGULATIONS ESTABLISHED BY INTERNATIONAL DIRECTIVES AND BY THE LAW IN FORCE IN THE COUNTRY OF USE. ALL OPERATORS MUST STRICTLY COMPLY WITH THE ACCIDENT PREVENTION REGULATIONS IN FORCE IN THE COUNTRY OF USE.

DURING HANDLING AND INSTALLATION OF THE PARTS, THE PERSONNEL SHALL BE EQUIPPED WITH SUITABLE PERSONAL PROTECTION EQUIPMENT (PPE) SO AS TO PERFORM THE WORKS REQUIRED UNDER SAFE CONDITIONS.

DO NOT REMOVE OR ALTER THE PLATES PLACED ON THE ACTUATOR BY THE MANUFACTURER.

IF THE WINDOW FRAME IS ACCESSIBLE FROM OR INSTALLED AT A HEIGHT OF LESS THAN 2.5 m FROM THE GROUND, AND IF IT CAN BE COMMANDED BY AN UNTRAINED USER OR WITH A REMOTE CONTROL DEVICE, FIT AN EMERGENCY STOP SYSTEM WHICH AUTOMATICALLY CUTS IN TO PREVENT THE RISK OF CRUSHING OR DRAGGING PARTS OF THE BODY INSERTED BETWEEN THE MOVING AND FIXED PARTS OF THE WINDOW FRAME.

ANY TAMPERING WITH OR UNAUTHORISED REPLACEMENT OF ONE OR MORE PARTS OR COMPONENTS OF THE ACTUATOR, OR THE USE OF UNORIGINAL ACCESSORIES AND CONSUMABLES, MAY INCREASE THE RISK OF ACCIDENT AND THUS RELIEVES THE MANUFACTURER OF ALL CIVIL AND PENAL LIABILITY

EXTRAORDINARY AND ROUTINE MAINTENANCE OPERATIONS INVOLVING THE TOTAL OR PARTIAL DISMOUNTING OF THE ACTUATOR MAY ONLY BE PERFORMED AFTER DISCONNECTING IT FROM THE POWER SUPPLY.

THIS APPLIANCE MAY NOT BE USED BY PERSONS (CHILDREN INCLUDED) WITH REDUCED PHYSICAL, SENSORIAL OR MENTAL CAPACITIES, OR INEXPERT PEOPLE, UNLESS THEY ARE SUPERVISED AND TAUGHT HOW TO USE IT BY A PERSON RESPONSIBLE FOR THEIR SAFETY. CHILDREN MUST BE CONTROLLED TO MAKE SURE THEY DO NOT PLAY WITH THE APPLIANCE.

4.2- SAFETY DEVICES

4.2.1- PROTECTIONS AGAINST ELECTRIC HAZARD

The actuator is protected against electric hazard due to direct and indirect contacts. The protection measures against direct contacts aim at protecting people against hazards due to contact with active parts, usually live parts; while the protection measures against indirect contacts aim at protecting people against hazards due to conducing part, which are usually insulated, but could become live in case of failure (insulation failure).

The adopted protection measures are the following:

1) Insulation of live parts by means of a plastic material body;

2) Enclosure with suitable protection degree;

3) Only for the mod.SL60/230V provided with protection against electric shocks: Protection of passive type given by the use of components with double insulation, also called components of class II or with equivalent insulation.

4.3- SAFETY PLATES

IT IS FORBIDDEN TO REMOVE, MOVE, SPOIL OR IN ANYWAY REDUCE THE VISIBILITY OF THE SAFETY PLATES. FAILURE TO OBSERVE THE ABOVE MAY CAUSE SERIOUS HARM TO PEOPLE AND DAMAGE TO PROPERTY. THE MANUFACTURER DECLINES ALL LIABILITY FOR ANY DAMAGE CAUSED BY THE FAILURE TO OBSERVE THE ABOVE REQUIREMENT.

Fig. 6 illustrates the safety plate: this must applied directly to the outside of the actuator or near it and always in a position where it can be seen by the installer and/or operator.

4.4- RESIDUAL RISKS

The installer and the user are herewith informed that after the actuator has been installed on the window, the actuator drive can accidentally generate the following residual risk:

Residual risk: Hazard of squashing or dragging of body parts inserted between the movable and the fix part of the window frame.

Exposure frequency: Accidental and when the installer or the user decides to perform a wrong voluntary action.

Severity damage: Light lesions (usually reversible).

Adopted measures: Before enabling the device, it is compulsory to verify that near the window there are not persons, animals or things whose safety may be accidentally jeopardized. During actuator operation, it is compulsory to be in a safe control position assuring visual control on the window movement.

Fig. 6

5.1- GENERAL INSTRUCTIONS

THE ACTUATOR INSTALLATION CAN BE PERFORMED EXCLUSIVELY BY COMPETENT AND QUALIFIED TECHNICAL PERSONNEL SATISFYING THE PROFESSIONAL AND TECHNICAL REQUIREMENTS FORESEEN BY THE LAWS IN FORCE IN THE COUNTRY OF INSTALLATION.

THE ACTUATOR PERFORMANCE MUST BE SUFFICIENT TO ASSURE THE CORRECT MOVEMENT OF THE WINDOW. IT IS COMPULSORY TO VERIFY THE THRUST OR TRACTIVE FORCE ACCORDING TO THE TYPE AND WEIGHT OF THE WINDOW (PAR. 3.4). IT IS FORBIDDEN TO EXCEED THE LIMITS GIVEN IN TAB. 1 CONCERNING THE TECHNICAL DATA (PAR. 3.3).

THE ACTUATOR INSTALLATION MUST BE PERFORMED EXCLUSIVELY WITH CLOSED WINDOW OR SKYLIGHT.

FOR CORRECT OPERATION OF THE ACTUATOR, THE WINDOW MUST HAVE A MINIMUM HEIGHT OF 800 mm (DISTANCE OF THE ACTUATOR FROM THE WINDOW OPENING HINGE). OTHERWISE, ASK YOUR DEALER OR THE MANUFACTURER FOR THE NECESSARY ACCESSORIES FOR A CORRECT INSTALLATION.

PROTECT THE STEM OF THE ACTUATORS TO PREVENT POSSIBLE CONTACT BETWEEN ANY PERSONS/OBJECTS IN THE VICINITY AND THE RACK OR STEM, DURING THE MOVEMENT AND IN THE CLOSED POSITION.

CHECK THE ADEQUACY OF THE WINDOW AND THE SUITABILITY OF THE MATERIALS OF THE WINDOW AND/OR FRAME ON WHICH THE ACTUATOR WILL BE FASTENED. AND IT MUST ENSURE A GOOD SUPPORT OF THE ACTUATOR-WINDOW ASSEMBLY DURING THE MOVEMENT.

IN CASE OF ASSEMBLY ON SKYLIGHTS VERIFY THAT THE ACTUATOR CAN ROTATE FREELY AND PERFORM THE OPENING OF THE WINDOW FRAME WITHOUT STRIKING AGAINST THE WALL OR AGAINST ANY OTHER EVENTUAL OBSTACLE.

VERIFY THAT THE WINDOW FRAME ON WHICH THE ACTUATOR IS GOING TO BE INSTALLED IS EQUIPPED WITH SUITABLE MECHANICAL BLOCKING DEVICES OR WITH AN ALTERNATIVE SAFETY SYSTEM IN ORDER TO AVOID THE ACCIDENTAL FALL OF THE WINDOW.

5.2- ASSEMBLING OF THE MOTOR ON THE ACTUATOR (Fig. 8 ÷ 11)

1) Open the package **(par. 3.7)** and extract the various components;
2) Replace the covering protection of the micro-switches located under the motor;
3) Verify that the mechanical blocking device "B" is perpendicular to the motor base (position 1); otherwise (position 2), take it to position 1 **(Fig. 8)**;
4) Insert the motor coupling into the proper seat located at the actuator end. Lower the actuator until it reaches the position of complete leaning **(Fig. 9)**: when the coupling has been performed, a coupling **"click"** should be heard;
5) Apply a light divergent force between the motor and the actuator **(Fig. 10)** to verify the correct installation: the two components shall result to be tightly coupled;
6) Mount the safety screw "V5" and the connector "C" using the supplied screw "V4" **(Fig. 11)**.

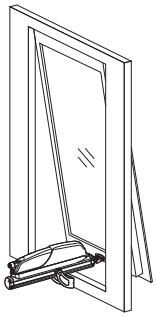
5.3- DISASSEMBLING OF THE MOTOR FROM THE ACTUATOR

1) Fig. 11- Loosen the screw "V4" and remove the connector "C";
2) Loosen and remove the screw "V5";
3) Rotate clockwise the mechanical blocking device "B" taking it into position 2, i.e. parallel to the motor base **(Fig. 8)**;
4) Lift the motor by acting in the opposite direction to the one shown by the arrow **(Fig. 9)**, therefore disassembling it from the actuator.

5.4- ASSEMBLING OF THE ACTUATOR ON TOP HUNG WINDOWS (Fig. 7 and 12 ÷ 17)

1) Fig. 12- With a pencil draw the centre line "X" of the window frame;
2) Fig. 13- With a suitable drill, create holes on the movable part and then fix the butterfly bracket "SF" using the screws "V1";
3) Fig. 13/14- Drill the fix part of the window frame and then fix the actuator support bracket "SA" using the screws "V1";
4) Fig. 15- Mount on the bracket "SA" (already fixed to the window frame) the external clamps "ME" and the internal clamps "MI" by using the screws "V3";

Fig. 7



5) Fig. 15- Make sure that the rod "A1" of the actuator is completely returned into the actuator;

6) Fig. 16- Insert the clamps "M1" into the guides "G" on the sides of the actuator;

7) Fig. 17- After having verified that the window frame is in closing position and that the actuator is positioned at stroke end, fix the thrust rod head "A1" to the butterfly bracket "SF" by means of the screw "V2" and of the nut "D1";

8) Let the actuator slide along its axis until such a pressure is performed on the seals as to obtain a good closing of the window frame. Then, fix the screws "V3" (tightening torque 12Nm) .

5.5- ELECTRICAL CONNECTIONS (Wiring diagram)

THE ELECTRIC CONNECTION OF THE ACTUATOR CAN BE PERFORMED ONLY BY COMPETENT AND QUALIFIED TECHNICAL PERSONNEL SATISFYING THE TECHNICAL AND PROFESSIONAL REQUIREMENTS FORESEEN BY THE LAW IN FORCE IN THE COUNTRY OF INSTALLATION ISSUING TO THE CUSTOMER A DECLARATION OF CONFORMITY FOR THE CONNECTION AND/OR THE PLANT PERFORMED.

THE ELECTRIC CONNECTION OF THE VERSION SL60L HAS TO BE CARRIED OUT WITH A VERY LOW SAFETY VOLTAGE FEEDER PROTECTED AGAINST SHORT CIRCUITS.

BEFORE PERFORMING THE ELECTRIC CONNECTION OF THE ACTUATOR, VERIFY THE CORRECT INSTALLATION ON THE WINDOW.

THE MAINS TO WHICH THE ACTUATOR IS CONNECTED MUST COMPLY WITH THE REQUIREMENTS OF THE LAWS IN FORCE IN THE COUNTRY OF INSTALLATION, AS WELL AS SATISFY THE TECHNICAL FEATURES GIVEN IN TAB. 1 AND ON THE RATING PLATE AND THE "CE" MARKING (PAR. 3.1).

THE SECTION OF THE MAINS CABLES MUST BE PROPERLY SIZED ACCORDING TO THE ABSORBED ELECTRIC POWER (SEE RATING PLATE AND "CE" MARKING).

ANY TYPE OF ELECTRIC MATERIAL (PLUG, CABLE, TERMINALS, ETC.) USED FOR THE CONNECTION MUST BE SUITABLE FOR THE USE, WITH "CE" MARKING AND COMPLYING WITH THE REQUIREMENTS FORESEEN BY THE LAWS IN FORCE IN THE COUNTRY OF INSTALLATION.

TO ASSURE EFFICIENT SEPARATION FROM THE MAINS, INSTALL AN APPROVED TEMPORARY BIPOLAR SWITCH (PUSH-BUTTON) UPLINE OF THE DEVICE. FIT A BIPOLAR MAIN SWITCH WITH CONTACT APERTURE OF AT LEAST 3 mm UP LONE OF THE CONTROL LINE.

BEFORE PERFORMING THE ELECTRIC CONNECTION OF THE ACTUATOR, VERIFY THAT THE POWER SUPPLY CABLE IS NOT DAMAGED. SHOULD IT BE DAMAGED, IT MUST BE REPLACED BY THE MANUFACTURER OR BY THE TECHNICAL ASSISTANCE SERVICE OR IN ANY CASE BY AUTHORIZED OPERATORS.

5.6- CONTROL DEVICES

THE CONTROL DEVICES USED TO DRIVE THE ACTUATOR MUST ASSURE THE SAFETY CONDITIONS FORESEEN BY THE LAWS IN FORCE IN THE COUNTRY OF USE.

According to the different type of installations, the actuators can be driven by the following control devices:

1) MANUAL PUSH-BUTTON:

Bipolar switch button with central OFF position, with biased-off switch;

2) OPTIONAL: CONTROL AND FEEDING UNIT:

Microprocessor control units (e.g.: Mod. TF, etc.) controlling the single actuator or more than one actuator simultaneously by means of one or more manual push-buttons, an infrared remote control or a 433 Mhz radio control.

To these control units, it is possible to connect the rain sensors **(RDC - 12V)**, the wind sensor **(RW)** and the brightness sensor;

THE EVENTUALLY USED UNITS MUST SUPPLY A VOLTAGE TO SL60 FOR MAX. 120 s.

5.7- EMERGENCY PROCEDURES

Should it be necessary to open the window manually due to power supply failure or mechanism block, follow these instructions:

BEFORE PERFORMING ANY TYPE OF INTERVENTION ON THE ACTUATOR AND ON THE WINDOW, IT IS COMPULSORY TO DISCONNECT THE POWER SUPPLY OF THE ACTUATOR AND TO PUT ON "0" THE EVENTUAL SWITCHES OF THE CONTROL DEVICES.

IT IS COMPULSORY TO PADLOCK THE MAIN SWITCH OF THE DISCONNECTION DEVICE INSTALLED ON THE MAINS IN ORDER TO AVOID ANY UNEXPECTED START. IF THE MAIN SWITCH CANNOT BE PADLOCKED, IT IS COMPULSORY TO PLACE A SIGN FORBIDDING THE ENABLING.

1) Fig. 15- Act on the screw "V2" by unscrewing the nut "D1" and by extracting it from the butterfly bracket "SF";

2) Open the window manually.

6.1- USE OF THE ACTUATOR

THE ACTUATOR CAN BE USED EXCLUSIVELY BY AN USER ACTING IN COMPLIANCE WITH THE INSTRUCTIONS CONTAINED IN THIS MANUAL AND/OR IN THE MANUAL OF THE ACTUATOR CONTROL DEVICE (e.g.: WIND AND RAIN CONTROL UNIT).

BEFORE USING THE ACTUATOR, IT IS COMPULSORY FOR THE USER TO READ AND UNDERSTAND IN ALL ITS PARTS THIS MANUAL, AS WELL AS THE EVENTUAL MANUAL OF THE INSTALLED CONTROL DEVICE TYPE.

BEFORE OPERATING THE ACTUATOR, THE USER MUST COMPULSORILY VERIFY THAT NEAR AND/OR UNDER THE WINDOW THERE ARE NOT ANY PERSON, ANIMAL AND THING WHOSE SAFETY MAY BE ACCIDENTALLY JEOPARDISED (SEE PAR. 4.4).

DURING THE OPERATION OF THE ACTUATOR CONTROL DEVICE, THE USER HAS TO COMPULSORY OCCUPY A CONTROL POSITION ASSURING VISUAL CONTROL ON THE WINDOW MOVEMENT.

DO NOT OPERATE DOME WINDOWS IN THE PRESENCE OF A LOAD OF SNOW IN EXCESS OF THE QUANTITY DECLARED ACCEPTABLE BY THE WINDOW MANUFACTURER.

THE FUNCTION EFFICIENCY AND THE RATED PERFORMANCE OF THE ACTUATOR, OF THE WINDOW FRAME ON WHICH IT IS INSTALLED AND OF THE ELECTRIC EQUIPMENT MUST BE VERIFIED STEADILY IN TIME BY PERFORMING, WHEN NECESSARY, INTERVENTIONS OF ROUTINE AND SUPPLEMENTARY MAINTENANCE ASSURING THE OPERATION CONDITIONS IN COMPLIANCE WITH THE SAFETY REGULATIONS.

ALL ABOVE MENTIONED MAINTENANCE INTERVENTIONS MAY BE PERFORMED EXCLUSIVELY BY TECHNICAL COMPETENT AND QUALIFIED TECHNICAL PERSONNEL SATISFYING THE TECHNICAL AND PROFESSIONAL REQUIREMENTS FORESEEN BY THE LAW IN FORCE IN THE COUNTRY OF INSTALLATION.

IN ORDER FOR THE AUTOMATION UNIT TO OPERATE CORRECTLY, WE RECOMMEND CARRYING OUT PERIODICAL MAINTENANCE ON IT, AS INDICATED IN PAR. 7.1 OF THIS MANUAL.

TOPP INFORMS THE USER THAT, IN ACCORDANCE WITH ART. 8 OF MINISTERIAL DECREE NO. 38 OF 22.1.2008, THE OWNER OF THE SYSTEM IS RESPONSIBLE FOR ADOPTING ALL NECESSARY MEASURES TO MAINTAIN THE SAFETY FEATURES SET OUT IN APPLICABLE LEGISLATION, OBSERVING THE INSTRUCTIONS FOR MAINTENANCE AND USE PROVIDED BY THE MANUFACTURER OF THE DEVICE AND BY THE COMPANY THAT CARRIED OUT THE INSTALLATION.

7.1- GENERAL INSTRUCTIONS

IF THE ACTUATOR WORKS INCORRECTLY, CONTACT THE MANUFACTURER.

ANY WORK ON THE ACTUATOR (E.G.: POWER CABLE, ETC.) OR ITS COMPONENTS MAY ONLY BE CARRIED OUT BY PERSONNEL QUALIFIED BY THE MANUFACTURER. TOPP DECLINES ALL LIABILITY FOR WORK PERFORMED BY UNAUTHORISED PEOPLE.

EXTRAORDINARY AND ROUTINE MAINTENANCE OPERATIONS INVOLVING THE TOTAL OR PARTIAL DISMOUNTING OF THE ACTUATOR MAY ONLY BE PERFORMED AFTER DISCONNECTING IT FROM THE POWER SUPPLY.

The actuator incorporates components that do not require significant routine or extraordinary maintenance operations.
The recommended maintenance activities should in any case involve the periodical execution (every 6 mounths) of at least the following operations: that the actuator assembly components are clean, the replacement of components that show signs of superficial damage such as injuries, cracks, discoloration, etc., the fixing systems (brackets and screws) are tight, the window frame is not deformed and the seals are tight, and check the cables and connectors.

This maintenance activity may be carried out either by TOPP, in accordance with a specific agreement made with the user, or by the installation technician or by other competent and qualified technical personnel in possession of all legal requirements.

8.1- GENERAL INSTRUCTIONS

THE DEMOLITION OF THE ACTUATOR MUST OCCUR IN COMPLIANCE WITH THE LAWS IN FORCE ON ENVIRONMENT PROTECTION.

DIFFERENTIATE THE PARTS MAKING UP THE ACTUATOR ACCORDING TO THEIR DIFFERENT MATERIAL TYPE (PLASTIC, ALUMINIUM, ETC.).

9.1- GENERAL INSTRUCTIONS

THE USE OF "NON-ORIGINAL" SPARE PARTS AND ACCESSORIES WHICH MAY ENDANGER THE SAFETY AND THE EFFICIENCY OF THE ACTUATOR IS FORBIDDEN.

ORIGINAL SPARE PARTS AND ACCESSORIES HAVE TO BE REQUESTED EXCLUSIVELY TO YOUR DEALER OR TO THE MANUFACTURER STATING TYPE, MODEL, SERIAL NUMBER, AND YEAR OF CONSTRUCTION OF THE ACTUATOR.

Fig. 8

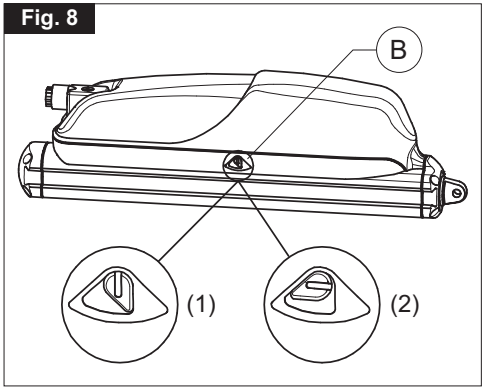


Fig. 9

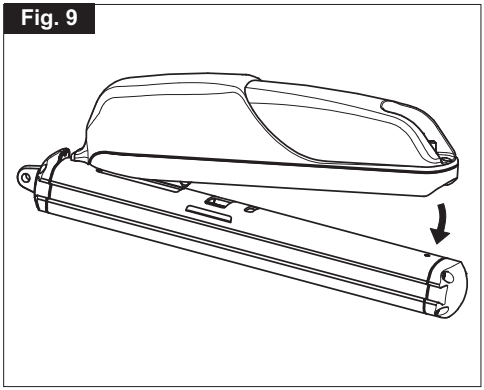


Fig. 10

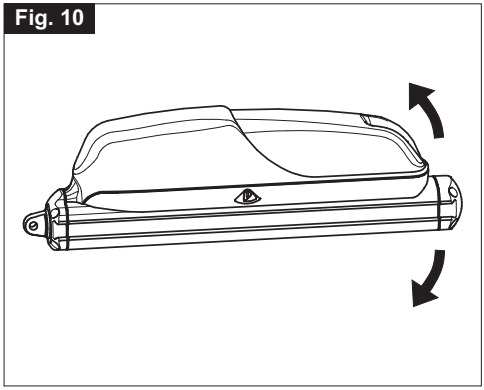


Fig. 11

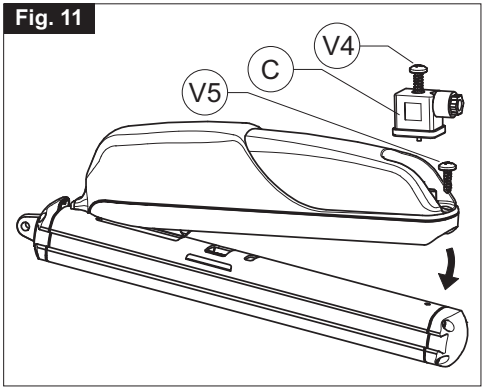


Fig. 12

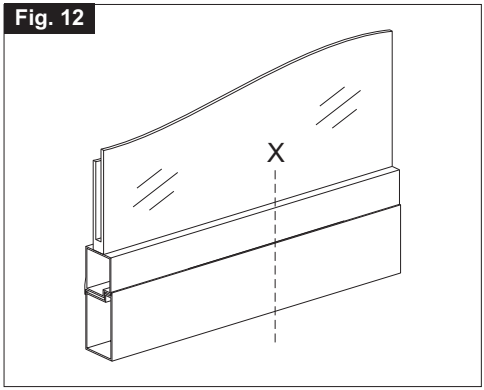


Fig. 13

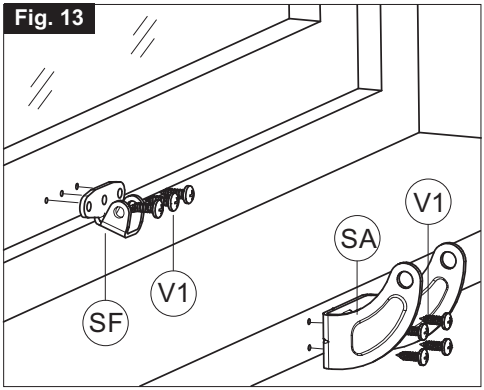


Fig. 14

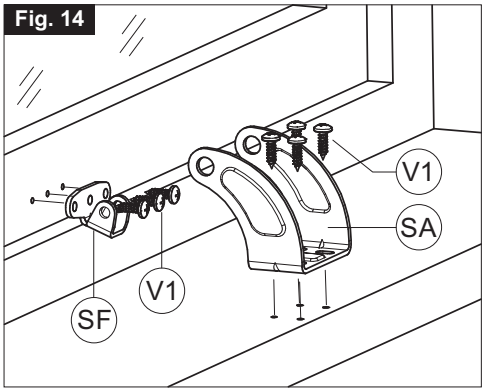


Fig. 15

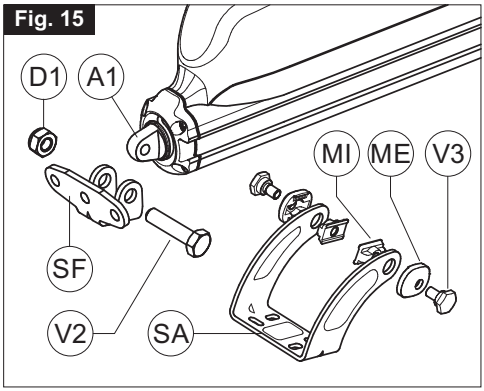


Fig. 16

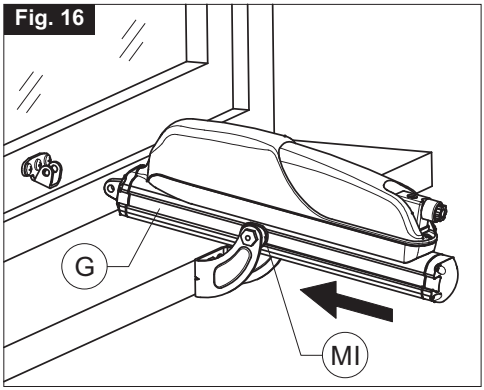
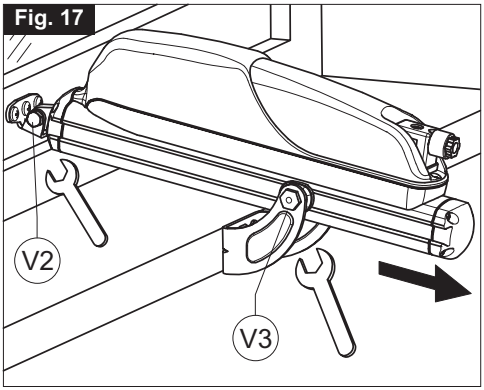
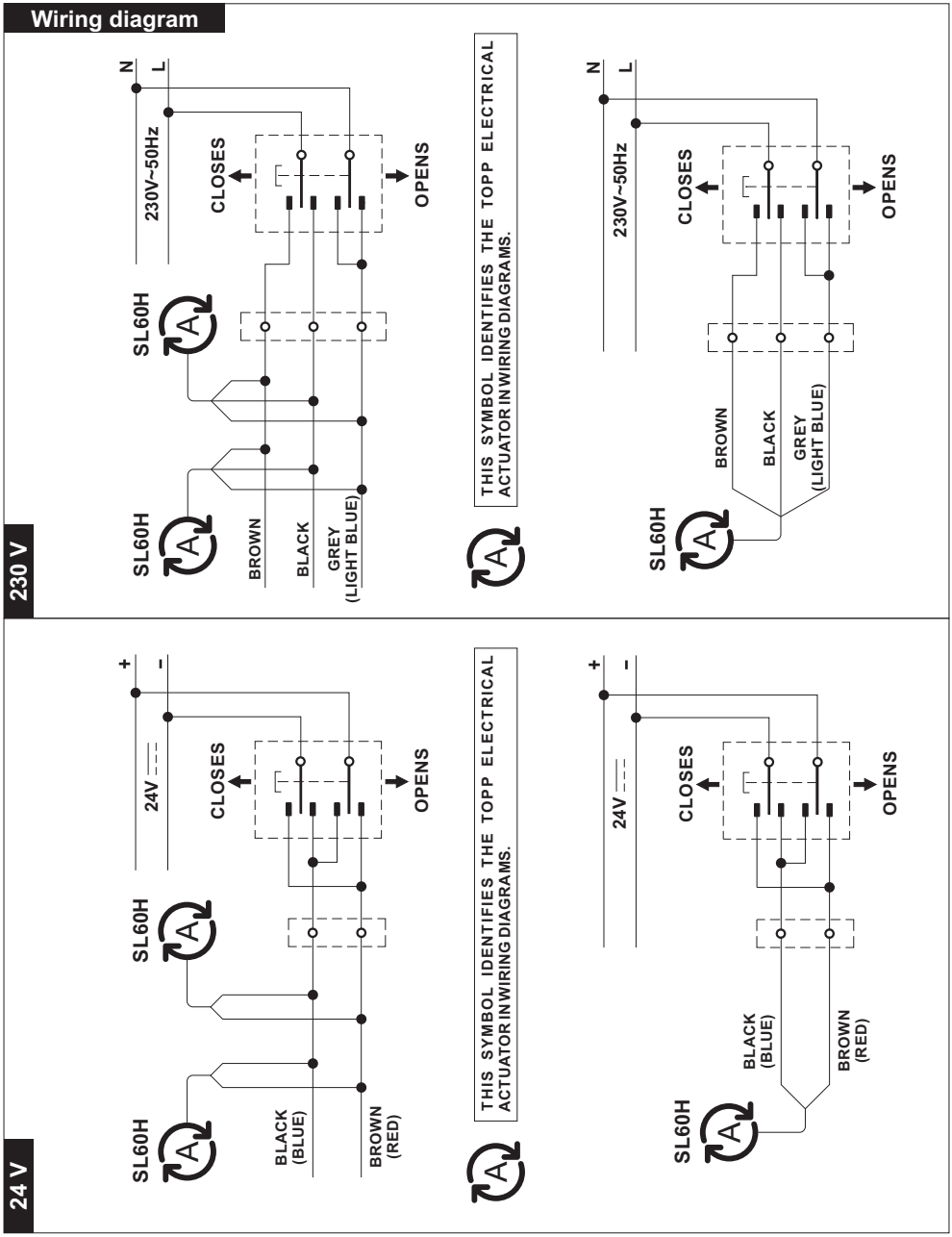


Fig. 17



Wiring diagram



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