

## SKY 650

EN

INSTRUCTION MANUAL

### RACK ACTUATOR

Force 600N – Strokes 180, 230, 350, 550, 750, 1000 mm  
Electrical feeding 110-230V~ 50/60Hz and 24V---



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## USER INSTRUCTIONS

**CAUTION.** Carefully observe all the following installation instructions to ensure personal safety.

The device is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lacking experience and knowledge. Do not allow children to play with the fixed controls and keep any remote-control units out of their reach.

Have installation checks performed periodically by qualified personnel from a service centre authorised by the manufacturer. Do not use if repair or adjustment is required.

**CAUTION:** if the power cable is damaged, it must be replaced by qualified personnel from a service centre authorised by the manufacturer.

**CAUTION.** Disconnect the power supply during cleaning or maintenance operations. Do not use solvents or jets of water to wash the appliance; the appliance should not be submerged in water.

In the event of fault or malfunction, switch off the device at the main switch. All repairs and adjustments (e.g. setting the stroke) must only be performed by qualified personnel from a service centre authorised by the manufacturer.

Always request exclusive use of original spare parts. Failure to respect this condition could compromise safety and invalidate the benefits contained in the warranty for the appliance. In the event of any problems or queries, consult your agent or contact the manufacturer directly.

The A-weighted sound pressure level is less than 70dB(A).

Carefully preserve these instructions after installation.

# INSTALLER INSTRUCTIONS

**nekos** products have been manufactured in accordance with safety standards and conforms to the stipulations of current standards in force.

When correctly assembled, installed and used according to the present instructions, they will not generate any danger for persons, animals or items.

## Symbols used in the manual



### **DANGER**

*This indication draw the attention about potential dangers for safety and health of peoples and animals.*

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## 1. Security rules



**CAREFULLY OBSERVE ALL THE FOLLOWING INSTALLATION INSTRUCTIONS TO ENSURE PERSONAL SAFETY. IMPROPER INSTALLATION CAN SERIOUSLY ENDANGER SAFETY.**



### **MANDATORY RISK ANALYSIS AND PROTECTION MEASURES.**

The Nekos electrical actuators comply with the Machinery Directive (2006/42/EC), Standard IEC 60335-2-103 (Particular requirements for drives for gates, doors and windows) and other directives and regulations indicated in the attached Declarations of Incorporation and CE Conformity (at the end of the manual). According to the Machinery Directive, actuators are “partly completed machinery” intended for incorporation into doors and windows. The manufacturer/supplier of the window is required, with exclusive responsibility, to ensure the compliance of the entire system with the applicable standards and to issue CE certification. We strongly discourage any use of the actuators other than that specified and therefore, in any case, the supplier of the complete system retains full liability.

For systems installed at a height of less than 2.5 m above floor level or other levels accessible to users, the manufacturer/supplier of the window must conduct **risk analysis** regarding potential harm (violent blows, crushing, wounds) caused to people by normal use or possible malfunction or accidental breakage of the automated windows, and to implement suitable protective measures in view of these. Such measures include those recommended by the specified standard:

- controlling the actuators via a “deadman’s button” placed near the system and within the operator’s field of view, to ensure that people are out of the way during operation. The button must be placed at a height of 1.5 m and operated by key if accessible to the public; or:
- use of contact safety systems (also included in the actuators) that ensure a maximum closing force of 400/150/25 N, measured in accordance with paragraph BB.20.107.2 of IEC 60335-2-103; or:
- use of non-contact safety systems (lasers, light grids); or:
- use of fixed safety barriers that prevent access to moving parts.

Automated windows are deemed adequately protected if they:

- are installed at a height of >2.5 m; or:
- have a leading-edge opening of <200 mm and a closing speed of <15 mm/s; or:
- are part of a smoke and heat evacuation system for emergency use only.

In any case, moving parts of windows that could fall below 2.5 m following breakage of a system component need to be fixed or secured in order to prevent them from suddenly falling or collapsing: e.g. the use of safety arms on bottom-hung windows.



The device is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lacking experience and knowledge. Do not allow children to play with the fixed controls and keep any remote-control units out of their reach.

The actuator is destined exclusively for installation indoors. For any special application we recommend you consult the manufacturer beforehand.

After removing packaging, check for any damage on the appliance.

Always request exclusive use of original spare parts. Failure to respect this condition could compromise safety and invalidate the benefits contained in the warranty for the appliance.

In the event of any problems or queries, consult your agent or contact the manufacturer directly.

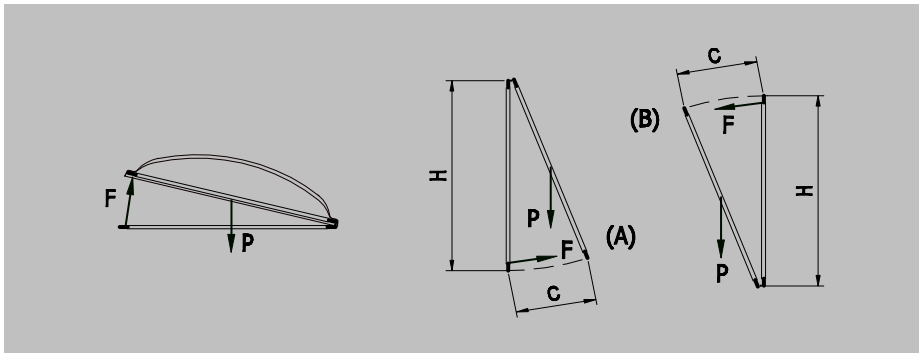
## 2. Formulas and recommendations for installation

### 2.1. Calculation of opening / closure force

Using the formulas on this page, approximate calculations can be made for the force required to open or close the window considering all the factors that determine the calculation.

#### *Symbols used for the calculation*

|   |  |
|---|--|
| F (Kg) = Force for opening or closing     | P (Kg) = Weight of the window (mobile sash only) |
| C (cm) = Opening stroke (actuator stroke) | H (cm) = Height of the mobile sash               |



#### For horizontal light domes or skylights

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

*(Eventual weight of snow or wind on the cupola should be calculated separately).*

#### For vertical windows

- TOP HUNG WINDOWS, OUTWARD OPENING (A)
- BOTTOM HUNG WINDOWS (B)

$$F = 0,54 \times P \times C : H$$

*(Eventual load of favourable or unfavourable wind on the sash should be calculated separately.)*

### 2.2. Maximum opening in accordance with sash height

The actuator stroke should be selected in accordance with the height of the sash and its application. Make sure that the actuator does not touch the profile of the sash when moving along its track, and ensure there are no obstacles blocking the opening and that the rack moves smoothly along the window frame.

**ATTENTION.** For safety reasons, always check application before fixing the actuator to the frame or sash. In the event of difficulty, request assistance from the manufacturer to check application.

## 3. Technical information about function

The rack actuator performs opening and closing movements for the window using a round section steel rack. Movement is powered by electricity that feeds a reduction motor controlled by an electronic board.

The opening stroke for the window CANNOT be programmed as it is regulated by the length of the rod on the reduction motor. The electronic control device allows the rack to protrude until it encounters an obstacle that blocks its stroke. This could be provided by the internal lock on the rack or complete closing/opening of the window.

In both outwards and return directions the stroke-end uses a self-defining electronic process with power absorption, and for this reason, no adjustment is required.

## 4. Construction and standards



**INTENDED USE.** The SKY650 rack actuator has been designed and manufactured to open and close top hung windows opening outwards, bottom hung windows, dormer windows, light domes and skylights. Specific use is for ventilation and airing of areas; any other use is strongly discouraged, with the supplier of the entire system in any case retaining sole liability.

The actuator is manufactured in accordance with the Directives and following Regulations listed in the attached Declaration of Incorporation and Conformity C€.

Electrical connections must conform to regulations in force for the design and set up of electrical equipment.

To ensure efficient separation from the grid, an approved type of bipolar “dead-man” switch should be used. An omnipolar general power switch with minimum distance of 3 mm between contacts should be installed upstream of the control line.

Application is performed using the brackets provided and any other type of assembly should be checked with the manufacturer, who will not accept any responsibility for incorrect or malfunctioning assembly.

The SKY650 actuator comes packaged in a cardboard container which contains:

- 1 actuator with 2 metre (±5%) lead
- 1 standard support bracket with respective grips and fixing screws
- 1 bracket for fixing to the frame
- Small parts packaging
- Instruction manual

## 5. Id plate and marking data

The SKY650 actuators have CE marking and comply with the Standards listed in the Declaration of Conformity. They also come with a Declaration of Incorporation, due to their classification by the Machinery Directive as “partly completed machines”. Both declarations are included in the final pages of this manual.

The plate data is displayed on an adhesive label placed on the outside of the casing, which must remain intact and visible.

The main information it displays includes: manufacturer's address, product name - model number, technical characteristics, production date and serial number. In the event of a complaint, please indicate the serial number (SN) displayed on the label.

An explanation of the symbols used on the label to abbreviate the technical characteristics is given in the table in the chapter on “TECHNICAL DATA”.

## 6. Technical specifications

| Model   | SKY650 230V                            | SKY650 24V       |
|---|--|------------------|
| Thrust and traction force ( $F_N$ )   | 600 N                                  |                  |
| Course lengths ( $S_V$ )  | 180, 230, 350, 550, 750, 1000 mm (*)   |                  |
| Input voltage ( $U_N$ )   | 110-230V~ 50/60 Hz                     | 24V---           |
| Current absorption at nominal load ( $I_N$ )                                  | 0,45 – 0,22 A                          | 1,10 A           |
| Power absorption at nominal load ( $P_N$ )                                    | ~ 30-31 W                              | ~ 27 W           |
| Travel speed without load   | 7,5 mm/s                               | 7,6 mm/s         |
| Length of run without load  | In accordance with length of truck run |                  |
| Electrical insulation   | Class II                               | Class III (Selv) |
| Type of service ( $D_R$ )   | 2 cycles                               | 5 cycles         |
| Max. and min. temperatures for function                                       | -5 +65 °C                              |                  |
| Degree of protection for electrical devices                                   | IP 42                                  |                  |
| Adjustment of socket at casing  | Position self-regulating               |                  |
| Connection in parallel of two or more motors                                  | Yes                                    |                  |
| Connection in tandem or in series   | Yes                                    |                  |
| Holding nominal force ( <i>it can vary according to the chosen brackets</i> ) | 3500 N                                 |                  |
| Limit switch stop at opening and closure                                      | At absorption of power                 |                  |
| Protection against overload at opening and closure                            | At absorption of power                 |                  |
| Feeding cable length  | 2 m                                    |                  |
| Dimensions  | 115x42x(Course length+135) mm          |                  |
| Weight  | Varies according to construction       |                  |

Information presented in these illustrations is not binding and is also subject to variation without prior notice.

(\*) Technical personnel can shorten track runs by adjusting the internal limit switches.

## 7. Electrical supply

Depending on which model is used, the actuator can function on 24V--- with two cables in the lead, or on 110-230V~ 50/60 Hz with a three cable lead.

Low tension actuators 24V--- must be powered using a security feeder with an output tension of 24V--- (*min. 20,4V, max. 28,8V*).

### 7.1. Section choice of supply cables

Tension falls due to current passage in conductors is a basic aspect for safety and good appliance function. It is therefore extremely important that the conductor section in function of cable length is calculated correctly. The following table indicates cable lengths for an actuator connected at nominal charge.

| CABLE SECTION | Actuator fed at |         |          |
|---------------|-----------------|---------|----------|
|               | 24V ---         | 110V~   | 230V~    |
| 0.50 mmq      | ~20 m           | ~300 m  | ~1400 m  |
| 0.75 mmq      | ~30 m           | ~450 m  | ~2100 m  |
| 1.00 mmq      | ~40 m           | ~600 m  | ~2800 m  |
| 1.50 mmq      | ~60 m           | ~900 m  | ~4000 m  |
| 2.50 mmq      | ~100 m          | ~1500 m | ~6800 m  |
| 4.00 mmq      | ~160 m          | ~2500 m | ~11000 m |
| 6.00 mmq      | ~240m           | ~3700 m | ~15000 m |

## 8. Instructions for assembly

**These indications are intended for the attention of technicians and specialized personnel. Basic job and safety techniques are therefore not included.**

All preparatory operations, assembly and electrical connections must be carried out by technical and specialized personnel to guarantee best performances and good function of the chain operated actuator. First of all, please check that the following fundamental points have been satisfied:



Before installing the actuator, check that the moving parts of the window on which it is to be installed are in perfect working condition and that they open and close properly and are well balanced (where applicable).

Gear motor performances must be sufficient to move the window; any limits indicated in the technical data table on the product cannot be exceeded (page 7). Any eventual calculations may be made using the formula on page 5 of this manual.

**Warning:** Check that appliance has electrical feeding type equal to the one provided by checking with the data reported on the label attached to the gear motor.

Check that the actuator has not been damaged during transport, first visually and then by working it in both directions.

Transom window frames entail the risk of injury caused by accidental fall of the window. A compass limit switch or alternative safety system suitably designed to prevent any accidental falls should be installed.

### 8.1. Preparation of actuator for assembly

Before starting assembly of the actuator, prepare the following material for completion, equipment and tools.

- ◆ For fixing onto metal window frames: M5 threaded inserts (6 pieces), M5x12 flat headed metric screws (6 pieces).
- ◆ For fixing onto wooden window frames: self threading screws for wood Ø4.5 (6 pieces).
- ◆ For fixing onto PVC window frames: self threading screws for metal Ø4.8 (6 pieces).
- ◆ Equipment and tools: measuring tape, pencil, drill/screwdriver, set of drill heads for metal, insert for screwing in, electricians pliers, screwdrivers.



Fig. 1

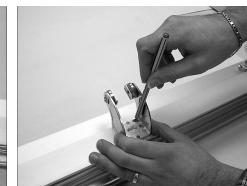


Fig. 2

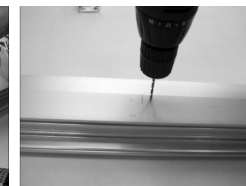


Fig. 3



Fig. 3 bis

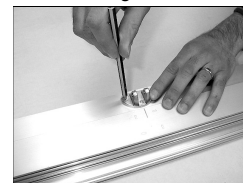


Fig. 4

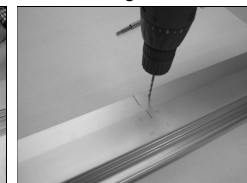


Fig. 5

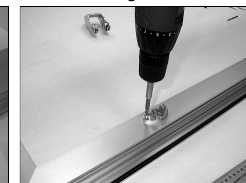


Fig. 5 bis



Fig. 6



## 8.2. Assembly with outward opening window

- Mark the centre line of the frame in pencil on both moveable and fixed parts (Fig. 1).
- Place the motor support bracket along the edge of the fixed part of the frame in line with the centre line marked out previously and mark the positions for the four holes for the fixing screws (Fig. 2).
- Drill holes into the frame and screw in the motor support bracket, making sure that all screws are fitted tightly (Fig. 3 and 3bis).
- Line up the front bracket along the centre line on the moveable part of the frame and mark out the three holes required for the screws (Fig. 4).
- Drill the holes and screw in the front bracket, making sure that all screws are fitted tightly (Fig. 5 and 5bis).
- Assemble the clamp screws onto the motor support bracket and screw in lightly.
- Insert the dove-tailed section of the actuator into the clamp screws. Make sure the shaped part of the base fits neatly into the slot to ensure the actuator runs smoothly along its axis.
- Now position the actuator so the eyebolt head is inserted into the front bracket support. Insert the M6x25 screw into the bracket and into the eyebolt and tighten the self-locking bolt with two 10 spanners.
- Manually move the actuator along its axis to close the frame and make it weather tight. Tighten the clamp screws previously only placed and set the actuator in line with the frame. Suggested tightening torque is 5-7 Nm.
- Plug the actuator in and carry out a test to check opening and closure of the frame. Make sure the frame closes fully and is weather tight. The limit switch for the actuator is automatic on reentry.
- The equipment will exert a pressure to guarantee even the largest of frames is completely weather tight.

## 8.3. Assembly for cupolas or dormer windows

Follow the instructions set out in "Assembly for outward opening windows".

## 8.4. Assembly for transom windows

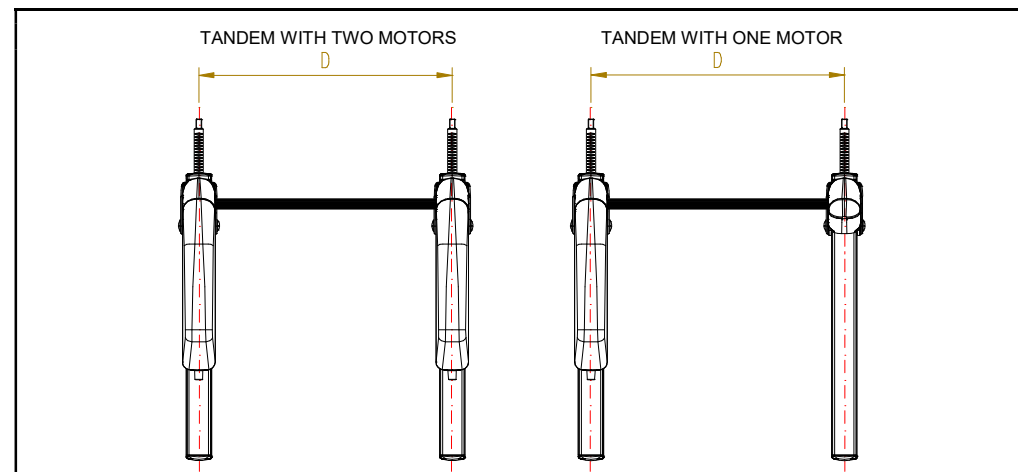
- Mark the centre line of the frame in pencil on both moveable and fixed parts (Fig. 1).
- Place the motor support bracket along the edge of the moveable part of the frame in line with the centre line marked out previously and mark the positions for the four holes for the fixing screws (Fig. 2).
- Drill holes into the frame and screw in the motor support bracket, making sure that all screws are fitted tightly (Fig. 3 and 3bis).
- Line up the front bracket along the centre line on the fixed part of the frame and mark out the three holes required for the screws (Fig. 4).
- Drill the holes and screw in the front bracket, making sure that all screws are fitted tightly (Fig. 5 and 5bis).
- Assemble the clamp screws onto the motor support bracket and screw in lightly.

- Insert the dove-tailed section of the actuator into the clamp screws. Make sure the shaped part of the base fits neatly into the slot to ensure the actuator runs smoothly along its axis.
- Now position the actuator so the eyebolt head is inserted into the front bracket support. Insert the M6x25 screw into the bracket and into the eyebolt and tighten the self-locking bolt with two 10 spanners.
- Manually move the actuator along its axis to close the frame and make it weather tight. Tighten the clamp screws previously only placed and set the actuator in line with the frame. Suggested tightening torque is 5-7 Nm.
- Plug the actuator in and carry out a test to check opening and closure of the frame. Make sure the frame closes fully and is weather tight.
- The limit switch for the actuator is automatic on reentry. The equipment will exert a pressure to guarantee even the largest of frames is completely weather tight.

## 8.5. Assembly of more than one actuator with connection bar

SKY650 actuators can be used in tandem or series by means of a mechanical connection bar. Movement is thus transmitted mechanically and uniformly and at the same speed.

Two or more actuators can be mounted on the frame with one or more motors in accordance with force requirements. The following diagram indicates position and distance between centres to be used during mounting.



| DISTANCE BETWEEN CENTRES OF THE CONNECTION BARS |                               |                    |                                   |
|---|-------------------------------|--------------------|-----------------------------------|
| Code  | Description                   | Length of bar (mm) | "D" distance between centres (mm) |
| 4010009   | Connection bar 1000 mm length | 1.035              | 1.000                             |
| 4010010   | Connection bar 1500 mm length | 1.535              | 1.500                             |
| 4010011   | Connection bar 2000 mm length | 2.035              | 2.000                             |
| 4010011   | Connection bar 2500 mm length | 2.535              | 2.500                             |

## Assemble as follows:

- Mark the assembly distance between centres for the two actuators out onto the frame in accordance with the measurements in the above table.
- Place the support brackets of the actuator into position, mark out the holes for drilling, drill the frame and mount the brackets (see “Assembly for outward opening windows” for details).
- Place the front brackets into position, mark out the holes for drilling, drill the frame and mount the front brackets (see “Assembly for outward opening windows” for details).
- Mount the actuators (see “Assembly for outward opening windows” for details) – see Fig.7.
- Mount the connection bar as follows:
  - Insert the connection bar first into one of the actuators, and then into the second actuator. Make sure the bar protrudes at least 2 mm from each actuator (Fig. 7 bis).
  - Mount and screw the M8x14 mm flat headed screw (provided with connection bar), into the two ends of the bar to prevent the bar from slipping out.



Fig. 7



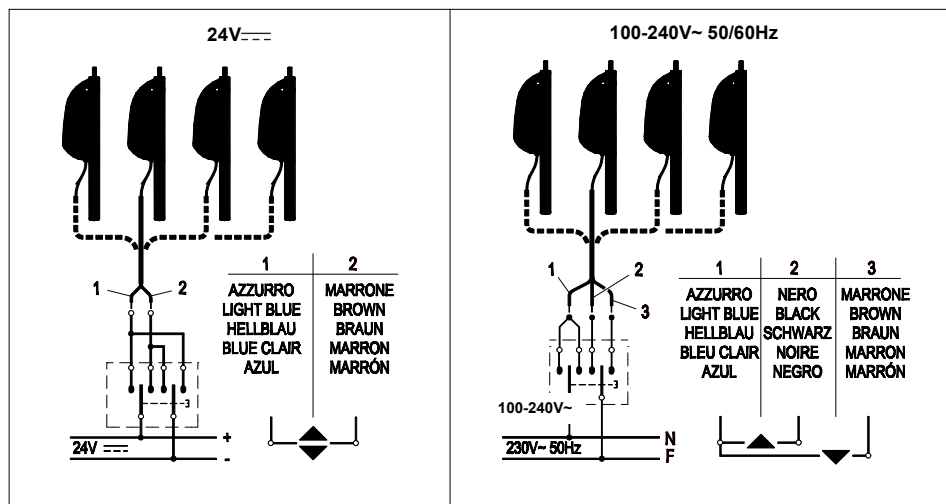
Fig. 7 bis

## 9. Electrical connections

The actuator comes with a 2 m long circa ( $\pm 5\%$ ) lead which has been calculated in accordance with safety rules.

In the event that the distance between the actuator and the control button should exceed this length, the cable should be extended.

See table on page 8 for conductor section indications. For harness, please follow the these diagrams.



After connecting the electricity supply to the control button (bipolar with arrows if possible), check that the up key function opens the window frame and the and down key function closes it. In the event of incorrect function, invert the two wires marked light blue and brown in the case of 24V $\equiv$  motors and invert the two wires marked black and brown for 110-230V $\sim$  motors.



**WARNING:** after every limit switch or electronic protection device function the rack will back track for around 2 mm in the opposite direction. This is quite normal, and has been designed to release tension on mechanical parts and allow complete weather proofing to enhance durability of mechanical parts.

## 10. Limit switches

### 10.1. Stroke-end at opening and closure

The limit switch at opening / closure is automatic, electronically operated and cannot be programmed. The actuator stops when the charge is absorbed when the window is completely open / closed.

### 10.2. Stroke adjustment where required

Factory settings for track lengths can be shortened to regulate how much of the rod protrudes. This operation must be carried out at the workbench with proper equipment by technical personnel qualified to operate with maximum care and safety.

Procedure:

- Remove the four screws on the front head of the SKY650 actuator.
- Extract the head and rod from the body of the actuator.
- Unscrew the two screws locking the two limit switch block pieces.
- Move the rubber stopper and block to the required position.
- Screw the two screws used for fixing the block into position back in again.
- Re mount everything back onto the body of the actuator.
- Screw in the four screws on the front head and check the settings for the new track run.

## 11. Checking for correct assembly

- Check that the frame has closed completely, even at the corners, and check there are no obstacles caused by assembly in the wrong position.
- Make sure the actuator is aligned with the axis of the window at 90° to the window itself, otherwise the rack will exert incorrect pressure on the rod and consume more voltage.
- Check the lead is not too tight, as this could damage the actuator during rotation, opening and closing of the window.
- Check all screws and nuts have been properly tightened.

## 12. Emergency manoeuvres, maintenance and cleaning

Should the window have to be opened manually in the event of no electricity, mechanical failure, or for normal maintenance or cleaning of the external surface of the window frame, the following instructions should be followed:

1. Unscrew the nut from the pin screw fixing the eyebolt head to the front shaft.
2. Hold the window with one hand and use the other hand to remove the pin screw (*this operation should be performed with the window open at least 10 cm to make it easier to remove the screw*).
3. Manually open the window.



**ATTENTION:** RISK OF THE WINDOW FALLING OUT; THE SASH IS IN DANGER OF FALLING OUT AS IT IS NO LONGER HELD IN PLACE BY THE RACK.

4. After maintenance and/or cleaning operations are complete, repeat points 1 and 2 in reverse order.

In the event in which the cable of feeding it is damaged, to make to replace it from the constructor or a qualified technician.

## 13. Troubleshooting

Please consult the following table for any eventual problems with function during installation or normal use:

| <i><b>Problem</b></i>       | <i><b>Possible cause</b></i>   | <i><b>Solution</b></i>  |
|-----------------------------|--|---|
| • Gear motor does not work. | • No electricity at source.<br>• Lead not connected, or one of the wires has come loose. | • Check trip switch and safety switch.<br>• Check all electrical connections on gear motor. |

## 14. Environmental protection

All materials used in the manufacture of this appliance are recyclable.

We recommend that the device itself, and any accessories, packaging, etc. be sent to a centre for ecological recycling as established from laws in force on recycling.

The device is mainly made from the following materials: aluminium, zinc, iron, plastic of various type, cuprum. Dispose materials in conformity with local regulations about removal.

## 15. Certificate of guarantee

The manufacturer will guarantee good function of the appliance. The manufacturer shall undertake to replace defective parts due to poor quality materials or manufacturing defects in accordance with article 1490 of the Civil Code.

The guarantee covers products and individual parts for **2 years** from the date of purchase. The latter is valid as long as the purchaser possesses proof of purchase and completion of all agreed conditions of payment.

Guarantee of good function of appliances agreed by the manufacturer implies that the latter undertakes to repair or replace free of charge and in the shortest period possible any parts that break while under warranty.

The purchaser is not entitled to any reimbursement for eventual direct or indirect damage or other expenses incurred. Attempt to repair by personnel unauthorised by the manufacture shall render the warranty null and invalid.

The warranty does not cover fragile parts or parts subject to natural wear and tear or corrosion, overload, however temporary etc. The manufacturer will accept no responsibility for eventual damage incurred by erroneous assembly, manoeuvre or insertion, excessive stress or inexpert use.

Repairs performed under guarantee are always "*ex factory of the manufacturer*". Respective transport expenses (out/back) are the responsibility of the purchaser.

## 16. Dichiarazione di Incorporazione (per una quasi macchina) e Dichiarazione CE di Conformità / Declaration of incorporation (for a partly completed machine) and EC Declaration of Conformity.

Con la presente il / Hereby the

|                               |   |
|-------------------------------|---|
| Costruttore:<br>Manufacturer: | <b>NEKOS S.r.l.</b><br>Via Capitoni 7/5- 36064 Colceresa – VI – Italy<br>Tel +39 0424 411011 – Email <a href="mailto:info@nekos.it">info@nekos.it</a> |
|-------------------------------|---|

dichiara sotto la propria responsabilità che i seguenti prodotti  
declare under its own responsibility that the following products

|  |  |
|--|--|
| Descrizione prodotto :<br>Product Designation: | <b>Attuatore a cremagliera, lineare a stelo, elettroserratura, tubolare per tende</b><br><i>Rack and pinion drive, linear drive, electromechanical lock, tubular drive</i> |
| Modello:<br>Type :                             | <b>230 V: SKY450 – SKY 650</b><br><b>24 V: SKY 650</b><br><b>K-LOCK – BK-LOCK</b><br><b>MR28-B</b>   |

Anno di costruzione dal / Year of manufacturing from: **2017**

|  |
|--|
| Soddisfano gli applicabili requisiti essenziali della <b>Direttiva Macchine 2006/42/EC, Allegato I</b><br><i>Fulfil the essential requirements of the Machinery Directive 2006/42/EC, Annex I, Art. 1.1.2, 1.1.3, 1.1.5, 1.2.1, 1.2.3, 1.2.6; 1.3.2, 1.3.4, 1.3.9, 1.5.1, 1.5.2, 1.5.6, 1.5.7, 1.5.8, 1.5.9, 1.5.10, 1.5.11, 1.7.1, 1.7.1.1, 1.7.3, 1.7.4.2, 1.7.4.3</i> |
| La documentazione tecnica pertinente è compilata secondo l' <b>Allegato VII, sezione B</b><br><i>The relevant technical documentation is compiled in accordance with Annex VII, Part B</i>   |

La persona autorizzata a costituire la documentazione tecnica pertinente è:

The person authorised to compile the relevant technical documentation is: **ing. Matteo Stefani – Nekos S.r.l.**

Su richiesta adeguatamente motivata delle autorità nazionali, la documentazione tecnica dei citati prodotti sarà resa disponibile, via e-mail, entro un tempo compatibile con la sua importanza.

In response to a reasoned request by the national authorities, we will provide, via e-mail, the relevant information on the product listed above within an adequate period proportional to its importance.

Inoltre i succitati prodotti sono conformi alle disposizioni pertinenti delle seguenti Direttive:

Furthermore the products listed above complies with the provisions of followings Directives :

- **2014/30/EU Direttiva Compatibilità Elettromagnetica / ElectroMagnetic Compatibility Directive (EMCD)**
- **2014/35/EU Direttiva Bassa Tensione / Low Voltage Directive (LVD)**
- **2011/65/EU Direttiva sulla restrizione dell'uso di determinate sostanze pericolose nelle apparecchiature elettriche ed elettroniche (Direttiva RoHS) / Restriction of the use of certain hazardous substances Directive (RoHS Directive)**
- **2015/863/EU Direttiva Delegata recante modifica dell'allegato II della Direttiva 2011/65/EU del Parlamento Europeo e del Consiglio per quanto riguarda l'elenco delle sostanze con restrizioni d'uso. / Delegated Directive amending Annex II of Directive 2011/65/EU of the European Parliament and of the Council regarding the list of substances with usage restrictions**

e delle seguenti norme armonizzate e/o specifiche tecniche:

and of the following harmonised standards and/or technical specifications:

|  |   |                               |
|--|---|-------------------------------|
| <b>EN 60335-2-103;</b>                       | <b>EN 61000-6-3:2007 + A1:2011 + AC:2012;</b> | <b>EN IEC 61000-6-2:2019;</b> |
| <b>EN 60335-1:2012 + AC:2014 + A11:2014;</b> | <b>EN 50581:2012;</b>                         |                               |

La messa in moto di una macchina completa che includa la quasi macchina sopra menzionata, da noi fornita, non è permessa finché non sia accertato che l'installazione sia stata fatta secondo le specifiche e le indicazioni di installazione contenute nel "Manuale d'istruzioni" fornito con la quasi-macchina, e che sia stata espletata e documentata, in apposito protocollo, una procedura di accettazione da parte di un tecnico abilitato.

Commissioning of the complete machinery including the above mentioned drives delivered by us is not allowed until it is ascertained that the installation of the complete machinery was performed in accordance with the specifications and the operating and installation advice given in our Mounting Instructions, and that the acceptance procedure was duly carried out and documented in an acceptance protocol by a specialist.

Questa dichiarazione è fatta dal costruttore / This is declared by the manufacturer :

**NEKOS S.r.l.** - Via Capitoni 7/5- 36064 Colceresa (Vicenza) - Italy

Rappresentato da / Represented by :

**Giuliano Galliazzo** – A.D. Presidente / President CEO

Firma / Valid signature

Luogo e data / Place and date: Colceresa **04/03/2020**

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