

Tubular motors

Rojaflex series ELMK

With electronic limit switches

ORIGINAL ASSEMBLY AND OPERATING INSTRUCTIONS

Eine aktuelle Vollversion der Anleitung finden Sie hier/
You can find a current full version of the manual here/
Vous trouverez ici une version complète et actuelle du mode d'emploi/
Puede encontrar una versión completa actual del manual aquí/
Potete trovare una versione completa attuale del manuale qui/
Een actuele volledige versie van de handleiding vindt u hier/
Aktualną, pełną wersję podręcznika można znaleźć tutaj/
A kézikönyv aktuális, teljes verzióját itt találja:



Original assembly and operating instructions **EN**

Instructions de montage et d'utilisation originales **FR**

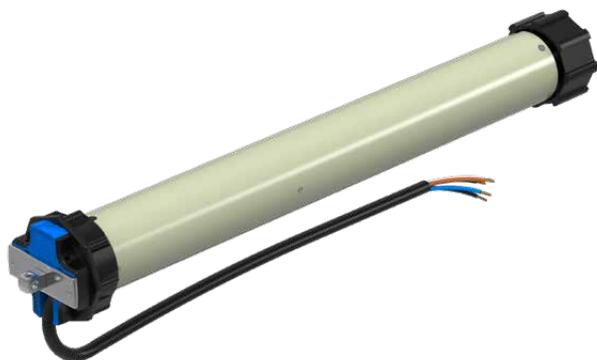
Instrucciones de montaje y funcionamiento originales **ES**

Istruzioni originali per il montaggio e l'uso **IT**

Originele montage- en gebruiksaanwijzing **NL**

Oryginalna instrukcja montażu i obsługi **PL**

Eredeti összeszerelési és kezelési útmutató **HUN**



ELMK series

Tubular motors with electronic limit switches

ELMK-10/15



Art.-Nr.
ELMK-10/15

90100066

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ATTENTION!

After unpacking, compare the device type with the corresponding information on the type plate. Incomplete devices or devices that do not comply with the specifications must not be put into operation and must be reported to our customer service department (see contact information) before commissioning.



 **Important safety instructions!**
For the safety of persons it is important to follow these instructions!

Please keep the manual and hand it over to the new owner in case of change of ownership!

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

Children are not allowed to play with the device.

Cleaning and maintenance by the user must not be carried out by children without supervision.

 **WARNING!**

The motor must be disconnected from its power source during cleaning, maintenance and parts replacement.

After unpacking, compare the motor type with the corresponding information on the nameplate.

Incomplete devices or devices that do not comply with the specifications must not be put into operation.

 **WARNING!**

Non-observance may result in danger to life!

There is a danger to life from electric shock when working on electrical equipment!

The mains connection of the motor and all work on electrical installations may only be carried out by an authorized electrician in accordance with the connection diagrams in this manual.

Carry out all assembly and connection work in a de-energized state.

When using the device in damp rooms, observe the regulations for installation in damp rooms, especially DIN VDE 0100, Parts 701 and 702.

Observe the protective measures contained in these regulations.

The use of defective devices can endangerment of persons and damage to damage to property (electric shock, short circuit).

Never use defective or damaged equipment.

Check the motor and power cord for intactness.

 **Please contact our service department (see last page for contact details) if you notice any damage to the device.**

 **ATTENTION!**
It is essential to observe the installation and connection instructions!
Improper installation and assembly can lead to serious injuries!

Lay the power cable of the motor internally in the empty conduit up to the junction box, observing the local electrical regulations.

Mains cables must not be laid in the winding space of the plant. Make sure that the power cable does not come into contact with moving parts of the plant.

⚠ For the electrical connection, a power connection with 230 V/50 Hz and an on-site disconnecting device (fuse) must be permanently available at the installation site.

⚠ To avoid hazards, the power cord may only be replaced by the manufacturer, its customer service or a similarly qualified person.

Only the same type of cable, supplied by the motor manufacturer, may be used.

Attach permanently mounted control devices visibly.

Both rated torque and rated service life must be compatible with the characteristics of the be compatible with the characteristics of the driven system.

⚠ **ATTENTION!**

Observe the notes on installation and operation of the system!

Failure to observe this warning may result in risk of injury!

Proper operation of the equipment is only guaranteed if it is properly installed, mounted, supplied with sufficient power and maintained.

Secure the system against unauthorized operation.

Take safety precautions against unintentional switch-on.

Before working on the system, disconnect all connecting lines to be installed from the power supply and secure them against unintentional reconnection. Remove all lines that are not required.

Set all devices that are not required for operation with the motor out of operation.

Attach the operating element of a manual release (emergency hand crank) below a height of 1.8 m.

⚠ **ATTENTION!**

It is essential to observe the instructions for correct use and the operating conditions!

There is an increased risk of injury if used improperly!

Use the motors only for opening and closing awnings or textile sunshades.

Only use original components and accessories from the manufacturer.

Instruct all persons in the safe use of the engine.

Watch the moving equipment and keep people away from it until the movement has stopped. Place warning signs on automatically moving equipment if necessary.

Prohibit children from playing with stationary controls or with the remote control.

Store the handheld transmitter in such a way that unintentional operation, e.g. by children playing, is impossible.

Carry out all cleaning work on the on the sun shading system in a de-energized state.

Take special care with moving and open / extended equipment, as parts may fall if fastenings (e.g. springs, brackets, consoles, etc.) weaken or are broken.

⚠ ATTENTION!**The following mounting instructions must be observed!**

Before installation, compare the mains voltage / frequency specifications on the type plate with those of the local mains.

The changeover time for changing the running direction must be at least 0.5 seconds!

The switches or controls used must not execute a simultaneous UP/DOWN command!

Moving parts of motors operating below a height of 2.5 m above the ground must be protected.

The winding shaft must be mounted horizontally! If the hangings are wound up at an angle, the motor or the hangings may be damaged.

Inspection openings must be easily removable and accessible and must not be permanently closed off inaccessibly.

⚠ IMPORTANT!

For permanently installed devices, a disconnecting device for each phase must be provided on the part of the installation in accordance with DIN VDE 0700.

Switches with a contact opening width of at least 3 mm (e.g. circuit breakers, fuses or RCDs) are considered to be disconnecting devices.

The manufacturer's liability for defects and damage is excluded if these are due to non-observance of the assembly and operating instructions (incorrect installation, incorrect operation, etc.).

⚠ IMPORTANT!**Disposal instructions!****European Directive 2012/19/EU (WEEE)**

Our electrical and electronic products are marked with a crossed-out wheeled garbage can, which indicates that these products and any batteries they may contain must be collected separately at the end of their useful life and must not be disposed of together with normal household waste.



The substances contained in these products may have negative effects on health and the environment, so users of electrical products and batteries also have a responsibility in recycling these waste materials and in this way contribute to the protection, preservation and improvement of the environment.

Obligation for separate disposal

Our duty as manufacturers is, among other things, to inform you of your obligation to separate disposal.

- When disposing of products with batteries, remove them from the product and dispose of them separately.
- When disposing of illuminants, they must be disposed of separately to the receptacle.

Return option and Recycling program EU

We are connected to public-law return systems throughout Europe and thus offer our customers access to a Europe-wide network of local recycling facilities (recycling centers, take-back points or similar).

Our products are professionally recycled via these local facilities. This reduces the amount of waste - to the benefit of the environment.

Our registration numbers:

	Reg. no.*
WEEE	DE 41060608
Battery	DE 88866710
Illuminant	
Transport and Shipping packaging	DE5768543732165

*For registration data of other European countries, see Contact Information page.

A take-back by us as manufacturer according to §19 WEEE is not to be asserted.

Information on the degree of fulfillment of the collection and recycling requirements

It is also our duty as a manufacturer to inform you about the degree of fulfillment of the collection and recycling requirements. Since we are connected to a qualified take-back system, we can refer to the degree of fulfillment of the recycling companies.

You can find this information on our website.

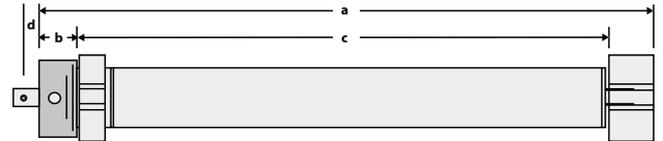
Deletion of personal data

Some of our products contain personal data. This applies in particular to information and telecommunications technology devices such as computers and smartphones. In your own interest, please note that each end user is responsible for deleting the data on the old devices to be disposed of!

Technical data

Motor type	Mains voltage	Mains-Frequency	Current recording	Engine power	Output torque	Output speed	Duty cycle	Temperature range	Protection class	Insulating material class	Capacitor	Emission-sound pressure-	Dimensions (mm)
ELMK-10/15	230 V ~	50 Hz	0,48 A	113 W	10 Nm	15 Min ⁻¹	4 Min.	-10 °C / +50 °C	IP 44	H	3,5 µF	≤ 70 dB	a=398 / B=16 C=376 / d=8

Jacket pipe diameter: ELMK = 45 mm



Scope of delivery

Compare after unpacking:

- the package contents with the information on the scope of delivery in these instructions.
- the motor type with the corresponding information on the nameplate.

Please refer to the packaging for the type designation, the technical data from the table above.

If necessary, incomplete devices or devices that do not comply with the specifications must not be put into operation and a complaint must be lodged with our customer service department (see contact information) before the motor is installed!

Drive

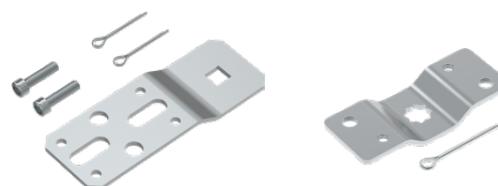
(Model / type see package specification)
incl. 3 m connection cable
and adapter/driver (pre-assembled)
- SW60 (ELMK-10/15)



Standard accessories (included in the scope of delivery)

1. Universal prefabricated box bearing SLLF
2. Star bearing STL

Assembly and operating instructions



1

2



Prepare assembly

Note before mounting

1. Read the operating instructions carefully and completely.
2. Make sure that the roller shutter is not damaged and that it can be opened and closed without malfunction. If necessary, replace damaged parts.

Mounting in roller shutter

1. Lower the shutter completely and determine whether the motor should be installed on the left or right side in the shutter box. Always choose the shortest path to the nearest junction box, as **Cables may not be laid in the roller shutter box.**
2. The limit switch is controlled via the fully pushed-on plastic ring.
Always ensure that the motor can be pushed into the shaft as far as it will go.

Structure of the shutter

The drawing below is exemplary and shows the basic structure of a roller shutter system.

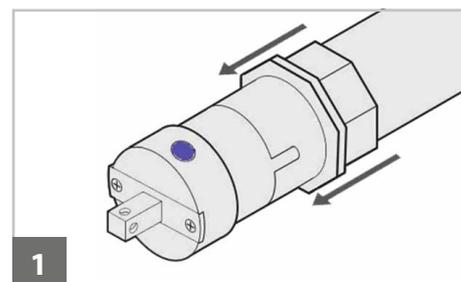
Deviations from the on-site installation are possible.



- | | | |
|------------------|------------------------|--------------------|
| 1 Bearing shell | 4 Steel shaft | 7 Engine mount |
| 2 Ball bearing | 5 Suspension openings | 8 Safety split pin |
| 3 Roller capsule | 6 Roller shutter motor | |

Mounting the motor

1. Lay the connecting cable in an empty pipe up to the junction box, observing the local building and electrical regulations.
2. Lower the shutter completely and loosen the shaft connection.
3. Disassemble the roller shutter shaft.

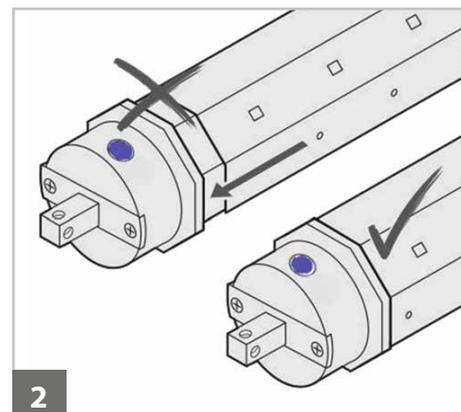


1

NOTE!

The roller capsule (counter bearing side) is usually secured with 2 screws.

4. Mount the motor bearing included in the scope of delivery on the side on which you want to mount the motor.
The motor can be installed on the left or right.
5. Push the barrel ring adapter over the barrel ring on the motor head as far as it will go (1).
Make sure that the groove in the adapter is in the correct position.
6. Push the motor into the roller shutter shaft until it is completely inserted with the race in the shaft (2).

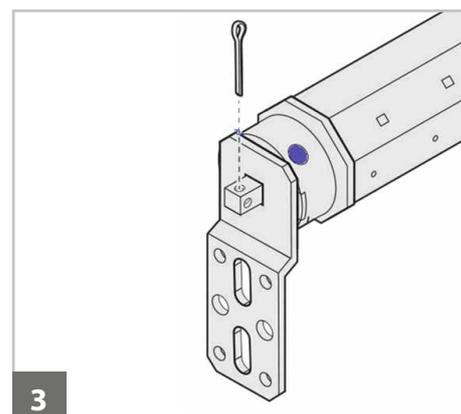


2

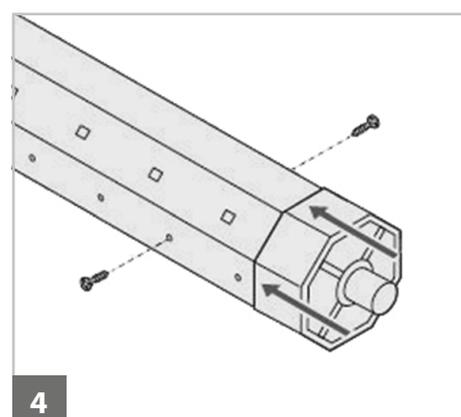
ATTENTION!

Never use a hammer when doing this!
Adapters and drivers may not slide in very smoothly, nevertheless do not hit the motor!

7. Check whether the shaft with the installed motor can be mounted appropriately in the roller shutter box or whether you may have to shorten the shaft.
On the counter bearing side (opposite the motor side) is the roller capsule or telescopic shaft. These can be pushed a few centimeters into the roller shutter shaft or pulled out of the shaft.
8. Insert the motor inserted into the shaft into the motor bearing and the shaft with the journal of the roller capsule into the counter bearing (3).
Secure the square spigot of the motor head with the locking pin included with the bearing.
9. Fasten the roller capsule with two opposite screws (4).



3



4

ATTENTION!

The roller capsule or telescopic shaft must be secured against displacement!

⚠ ATTENTION!

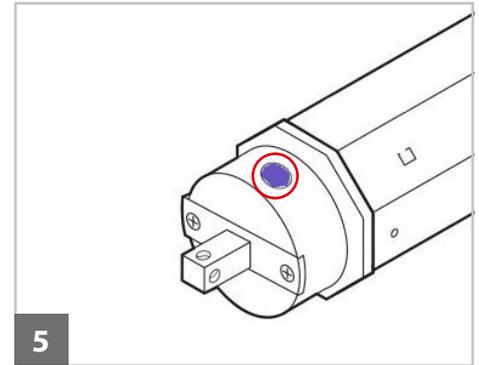
Do not drill into the motor's jacket tube and do not turn any screws into the motor!

When installed, the rolled-up roller shutter must run vertically into the guide rail.

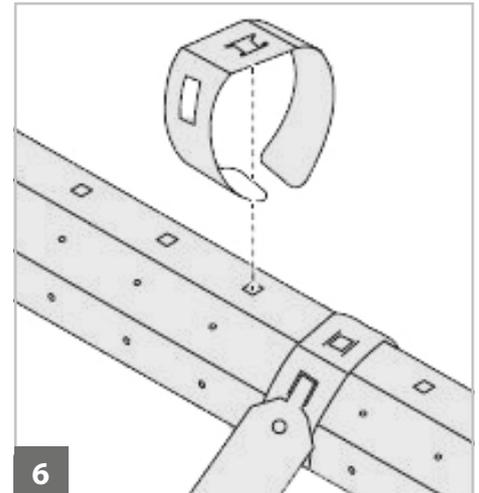
Make sure that the bearings or the shaft are installed horizontally. An oddly wound roller shutter can block and destroy the motor. Make sure that the motor is mounted so that the programming button on the motor head (5) remains easily accessible!

10. VTo fasten the roller shutter to the shaft, use steel band hangers, also called safety springs.

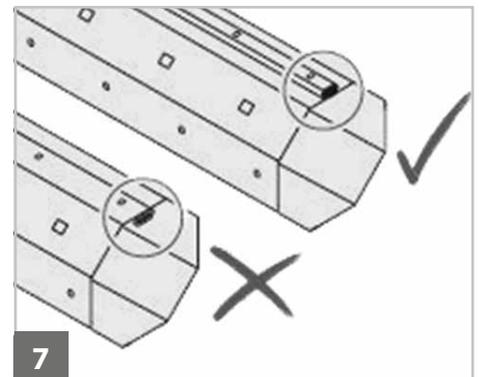
When installing 45 mm motors in 50 mm roller shutter shafts, it is recommended to use hook-in clips (6) for the retaining springs. The clips ensure that the roller shutter motors are not damaged by the dovetails of the securing springs.



5



6



7

⚠ ATTENTION!

If you screw screws into the roller shutter shaft to suspend the roller shutter, please ensure that they are short enough and do not touch the motor under any circumstances!

⚠ ATTENTION!

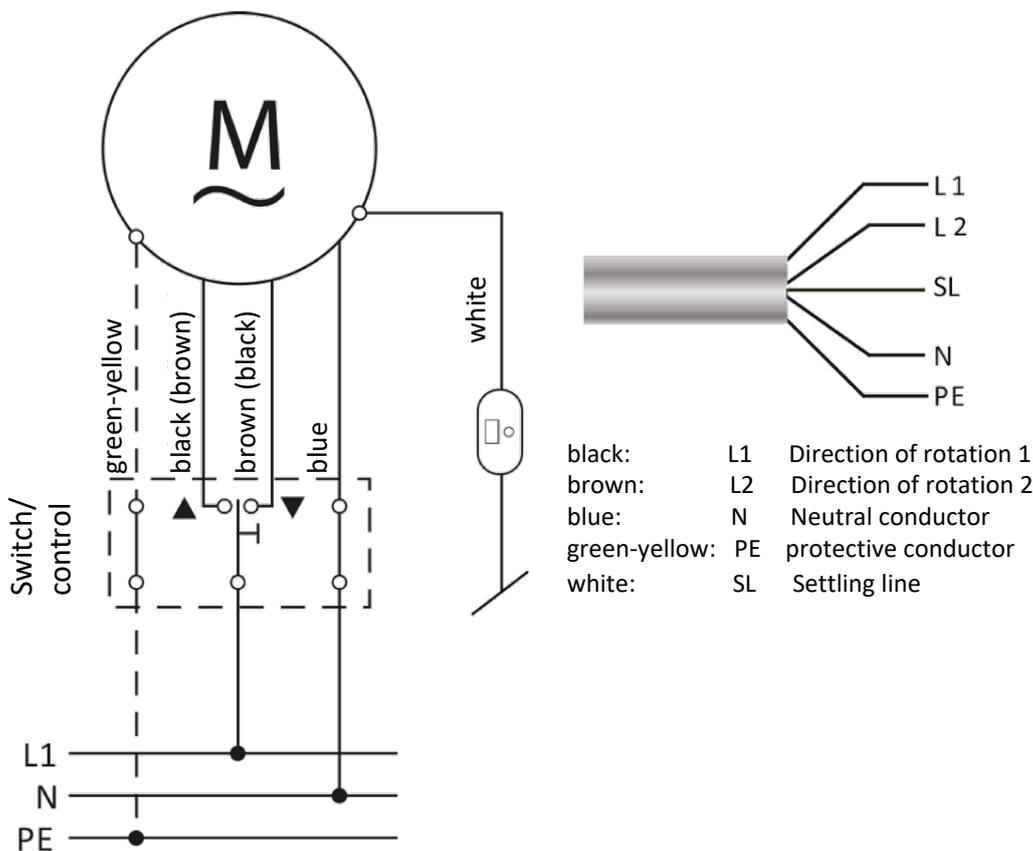
When installing in 50 mm steel shafts, make sure that the rebate of the shaft (7) is on the outside to avoid damage to the motor!

⚠ WARNING!

There is a danger to life from electric shock when working on electrical equipment!

- The mains connection of the motor and all work on electrical installations may only be carried out by an authorized electrician in accordance with the respective connection diagrams of the device.
- Carry out all assembly and connection work in a de-energized state.

Wiring diagram - motor with electronic limit switches



⚠ ATTENTION!

Under no circumstances may voltage be applied to the setting line SL (white)!

After setting the end positions, the white wire of the connecting cable of the actuator must be insulated with a clamp.

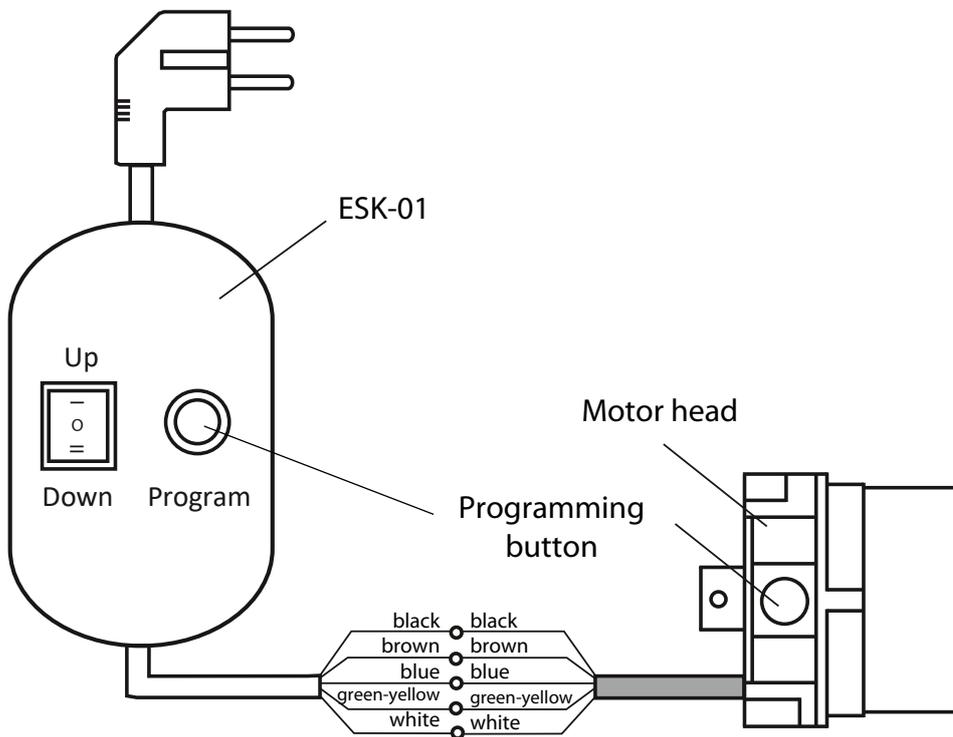
⚠ NOTE!

After connecting the control/switch, check the UP, STOP and DOWN functions.

The direction of rotation of the motor depends on the installation position of the motor (left/right) as well as on the winding direction of the roller shutter (left roller/right roller).

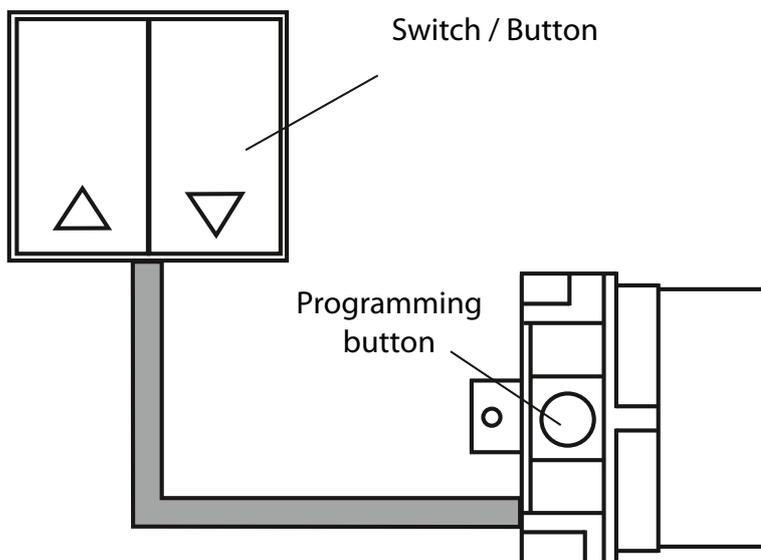
If the motor (shutter) should move in downward direction when the UP key is pressed, the brown and black wires (UP/DOWN) must be swapped.

Connection ESK-01 (limit switch set cable)



Connection standard pushbutton

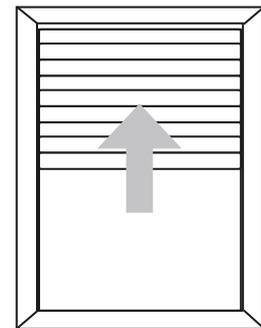
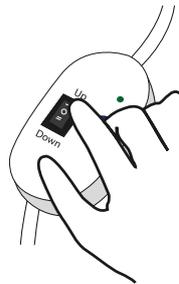
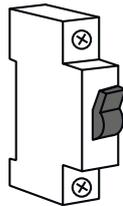
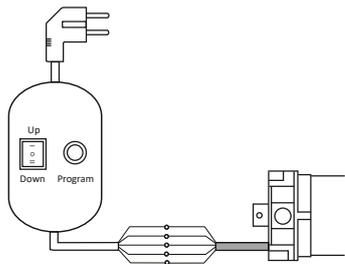
For programming the limit switches, a commercially available switch/button can be used as an alternative to the ESK-01. The end positions are then programmed (set) using the programming button on the motor head.



Set end positions (end points)

1. Automatic setting of end points in UP and DOWN direction

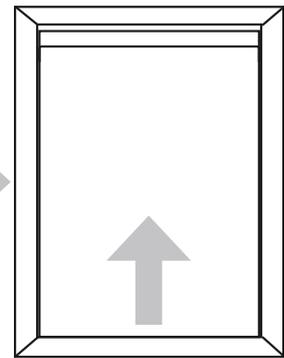
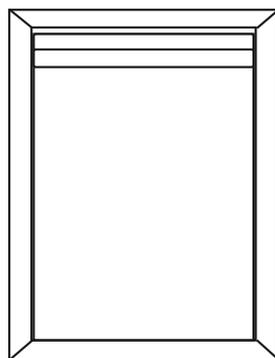
End stops (stop stoppers, angle end bar or end stops in the end bar) are required.



Connect the motor to the ESK-01 or a suitable pushbutton according to the connection diagram (pages 11-12) and switch on the power supply.

Press the UP/DOWN switch to the UP position.

The shutter moves in the OPEN direction.



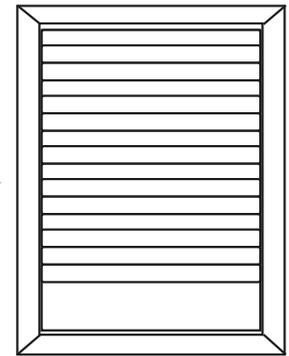
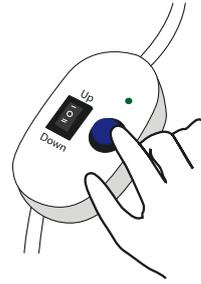
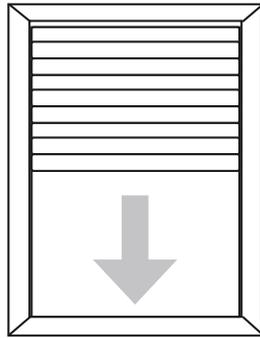
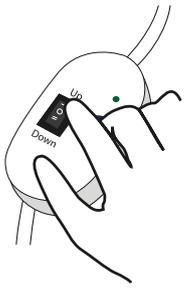
Shortly before the shutter has reached the desired upper end position, press the programming button on the ESK-01 or on the motor head.

The motor stops.

By pressing the programming key on the ESK-01 (or on the motor head), you can then make the fine adjustment.

Programming key press = Roller shutter moves upwards.
Release button = Motor stops.

Move the shutter to the desired "Open" position.



As soon as the roller shutter has reached the desired upper end position, release the programming button and set the UP/DOWN switch to the DOWN position.

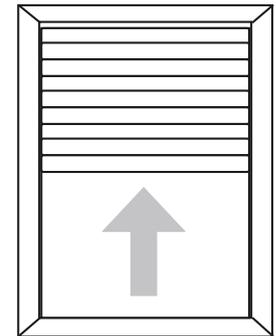
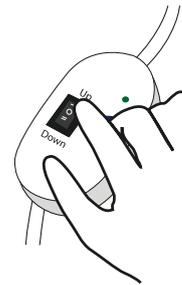
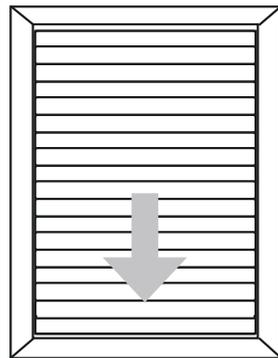
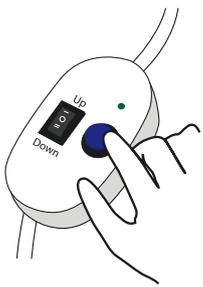
The upper end position is saved.

The shutter moves in the DOWN direction.

Shortly before the shutter has reached the desired lower end position, press the programming button on the ESK-01 or on the motor head.

The motor stops.

By pressing the programming key on the ESK-01 (or on the motor head), you can then make the fine adjustment.



Programming key press = Roller shutter moves down.
-
Release key = Motor stops.

Move the shutter to the desired "Closed" position.

As soon as the roller shutter has reached the desired lower end position, release the programming button and set the UP/DOWN switch to the UP position.

The roller shutter moves in the OPEN direction again and opens to the previously set "Open" position. The lower end position is saved.

The programming is completed.

! ATTENTION!

If you press the programming button of the ESK-01 again, the motor is in programming mode again! Therefore disconnect the ESK-01 now from the power supply and remove the white wire (setting wire) from the connection terminal.

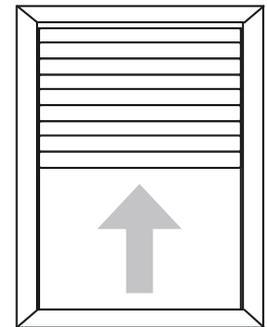
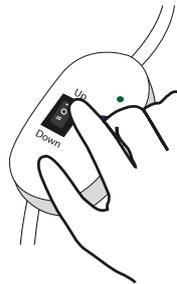
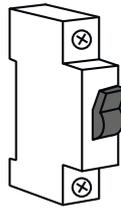
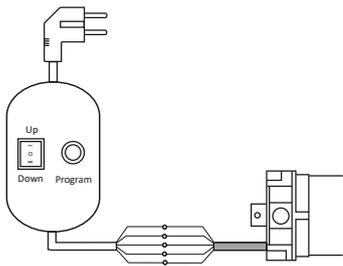
Then restore the power supply and open and close the shutter with the UP and DOWN keys several times to check the settings.

Factory setting

ATTENTION!

Take special care after deleting the endpoints!

Open and close the shutter several times using the UP and DOWN buttons to check the settings.



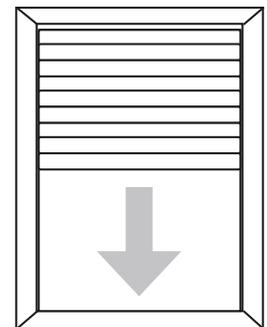
Connect the motor according to the connection diagram (page 10-11) to the ESK-01 or a suitable pushbutton and switch on the power supply.

Press the UP/DOWN switch to the UP position.

The shutter moves in the OPEN direction.

As soon as the roller shutter has reached the upper end point, switch 5 times in direct succession the switching position of the UP/DOWN key between position "0" (stop) and UP.

The distance between the switching units Stop /UP, Stop /UP, Stop /UP, Stop /UP, Stop /UP must not exceed 0.5 sec.

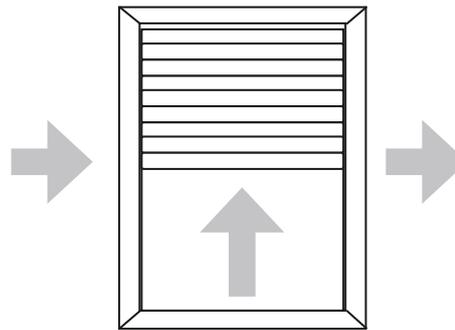


Then press the UP/DOWN switch to DOWN position within 0.5 sec.

The shutter moves in the DOWN direction.

As soon as the roller shutter has reached the lower end point, change 5 x directly in succession the switch position of the UP/DOWN key between position "0" (stop) and DOWN.

The distance between the switching units Stop /UP, Stop /UP, Stop /UP, Stop /UP, Stop /UP must not exceed 0.5 sec.



The shutter moves briefly (approx. 10 cm) in the OPEN direction to confirm.

Endpoints are deleted.

Disconnect the ESK-01 from the power supply.

After a waiting time of approx. 5 seconds you can set the end points again!

The programming of the end positions can also be done via any common setting cable or via a standard rocker button/rocker switch.

The prerequisite for teaching in the end points is that the programming button on the motor head is accessible.

Troubleshooting / FAQ

The motor does not stop automatically during adjustment work and test run.

Possible cause 1:

- The adapter has slipped off the race on the motor head.

Solution 1:

- Check that the adapter sits flush in front of the motor head and is fully inserted in the shutter shaft.
- Push the adapter flush in front of the motor head and push the roller shutter shaft completely onto the adapter.
- Reset end points.

Possible cause 2:

- Roller capsule is not fixed or roller shutter shaft is too short.

Solution 2:

- Fix roller capsule or insert suitable roller shutter shaft.

The motor moves in the wrong direction at the push of a button.

Cause:

- Black and brown wires (UP/DOWN) incorrectly connected.

Solution:

- Change the direction of rotation of the motor and swap the brown and black wires (UP/DOWN) (see page 13).

The motor stops or does not start during adjustment work or normal operation. does not start.

Possible Cause:

- Thermal protection has addressed.

Solution:

- Allow engine to cool for approx. 20 minutes.

The roller shutter stops when it is raised.

Possible Cause:

- Obstacle in the running rail / obstacle on the roller shutter curtain (dirt / icing etc.).

Solution:

- Remove the obstacle. Release the roller shutter in the downward direction.

The motor does not raise or lower the shutter, starts too slowly or with loud noises.

Possible cause 1:

- The connections are not correct.

Solution 1:

- Check connections.

Possible cause 2:

- Incorrect installation or overload.

Solution 2:

- Check installation and shutter load.

The shutter stops during lifting or lowering.

Possible cause 1:

- Set end point is reached.

Solution 1:

- Set end points again according to instructions.

Possible cause 2:

- Operating time has been exceeded (4 minutes).

Solution 2:

- Allow engine to cool for approx. 20 minutes.

Possible cause 3:

- Blockage due to obstacle or icing.

Solution 3:

- Check and remove obstruction or icing if necessary.

The engine does not run.**Possible Cause:**

- The mains voltage is missing.

Solution:

- Use a voltmeter to check whether the supply voltage (230 V) is present and check the wiring. Pay particular attention to the information on impermissible types of connection.
- Check installation.

The engine no longer runs or becomes extremely hot.**Possible Cause:**

- "Test run" of the motor outside the shaft (motor in uninstalled condition).
Motors convert unneeded power into heat!

Solution:

- Allow the motor to cool down for approx. 20 minutes and only switch on when assembled.

Declaration of conformity

Konformitätserklärung

ORIGINAL EU/EC DECLARATION OF CONFORMITY

ORIGINAL EU/EG KONFORMITÄTSERKLÄRUNG

We, Schoenberger Germany Enterprises GmbH & Co. KG, Zechstr. 1-7, D-82069 Hohenschäftlarn, Germany declare under our sole responsibility that the **Rojaflex** branded product:

*Wir, die Schoenberger Germany Enterprises GmbH & Co. KG, Zechstr. 1-7, D-82069 Hohenschäftlarn, Deutschland erklären unter unserer alleinigen Verantwortung, dass das mit der Marke **Rojaflex** versehene Produkt:*

Document no. / Dokument-Nr.	CE_ROJ_ELMK_2022-01-04	(Update LVD 2022)
Brand / Marke	Rojaflex	
Model / Modell	ELMK-10/15	
Product Type / Produkttyp	Motorisation for shutter, awning, blind and similar equipment Antriebe für Rollläden, Markisen, Jalousien und ähnliche Einrichtungen	

Serial number from / Seriennummer ab: xx_01_2022 (day/month/year) or 01/22 (week/year)

when uses as intended, according to his instructions, complies with the essential requirements of the following directives:

den einschlägigen Bestimmungen der folgenden Richtlinien entspricht, wenn es nach den Anweisungen des Herstellers bestimmungsgemäß verwendet wird:

Machinery directive 2006/42/EC
Maschinenrichtlinie 2006/42/EU

Electromagnetic compatibility directive (EMC) 2014/30/EU
Richtlinie Elektromagnetische Verträglichkeit 2014/30/EU

Low Voltage Directive 2014/35/EU
Niederspannungsrichtlinie 2014/35/EU

Restriction of the use of certain Hazardous Substances directive (RoHS) 2011/65/EU and 2015/863/EU
RoHS Richtlinien 2011/65/EU und 2015/863/EU

The following standards were applied to assess the conformity:
Die Konformität wird durch die Einhaltung folgender Normen nachgewiesen:

EN 60335-2-97:2006/A12:2015
EN 60335-1 :2012/A2:2019
EN 55014-1:2017
EN 55014-2:2015
EN 61000-3-2:2014
EN 61000-3-3:2013

Attestation of Conformity:
N8A 088081 0125 Rev.00 ((LVD 2014/35/EU) 2022-01-04

E8A 088081 0071 Rev. 00 (EMC 2014/30/EU) 2019-05-15

TÜV Süd

This declaration loses its validity in case of improper use and changes of the system or product that has not been agreed with the manufacturer.
Diese Erklärung verliert Ihre Gültigkeit bei nicht bestimmungsgemäßer Verwendung und bei Änderungen der Anlage bzw. des Produktes, die nicht mit dem Hersteller abgesprochen wurden.



Hohenschäftlarn, 2022-01-04



Michael Mayer
CEO / Geschäftsführer

EU Waste and recycling / Registrations

Germany for electrical devices:

Stiftung EAR
WEEE-Reg.-no.: DE 41060608

Germany for batteries:

Stiftung EAR
Batt-Reg.-no.: DE 88866710

Germany for packaging:

LUCID Reg.-no.: DE5768543732165

Austria for electrical devices:

Elektro Recycling Austria (ERA) GmbH
ERA Contract no: 40801

Austria for packaging:

Altstoff Recycling Austria (ARA) AG
ARA License number: 23363

Switzerland for electrical devices:

Stiftung SENS
Membership number: VP11544

France for electrical devices:

Ecologic
Membership number / Take-back system: M3670
National registry: UIN FR208795_01SUIN

France for packaging:

Citeo
Membership number / Take-back system: 532886
National registry: UIN FR208795_01SUIN

Spain for electrical devices:

ECOTIC
Reg.-no.: RII-AEE- 7601

Spain for packaging:

Ecoembes
Membership number: 97556

Italy for electrical devices:

Raccolta differenziata. Verifica le disposizioni del tuo Comune!

Reg.-no.: n/a

Italy for packaging:

Raccolta differenziata. Verifica le disposizioni del tuo Comune!

Membership number: n/a

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