

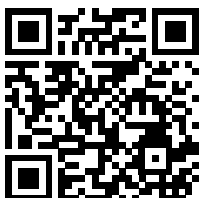
Tubular motor

Rojaflex MLL-80

With mechanical 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**



MLL series

Tubular motor with
mechanical limit switches

MLL-80/15



Art.-Nr.
MLL-80/15

90100062

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 a complaint must be lodged with our customer service department (see contact information) before commissioning.

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 **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 endanger persons and cause damage to property (electric shock, short circuit).

Never use defective or damaged equipment.

Check that the motor and power cord are intact.


 **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 in a visible position.
Both rated torque and rated operating time must be compatible with the characteristics of the driven equipment.

 **ATTENTION!**
Observe the notes on installation and operation of the system!
There is an increased risk of injury if this is not observed!
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 actuation with the motor out of operation.
Attach the actuating 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 is complete.
Attach warning labels to automatically moving equipment, if applicable.

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 mounting, compare the mains voltage / frequency specifications on the nameplate 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

As a manufacturer, it is also our duty 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.

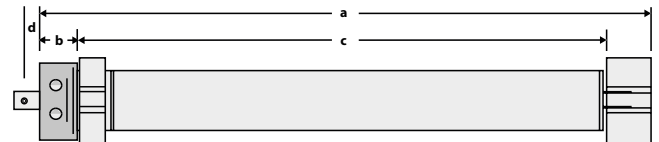
Deletion of personal data

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)
MLL-80/15	230 V ~	50 Hz	1,43 A	330 W	80 Nm	15 Min ⁻¹	4 Min.	-10 °C / +50 °C	IP 44	H	14 µF	≤ 70 dB	a=660 / B=23 C=620 / d=10

Jacket pipe diameter: MLL-80 = 59 mm
Limit switch range: 22 U



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)
- SW70 (MLL-80/15)

Standard accessories (Included in delivery)

1. Standard star bearing
2. Universal star flat bearing
3. Motor adjustment pin

Assembly and operating instructions



Prepare assembly

Note before mounting

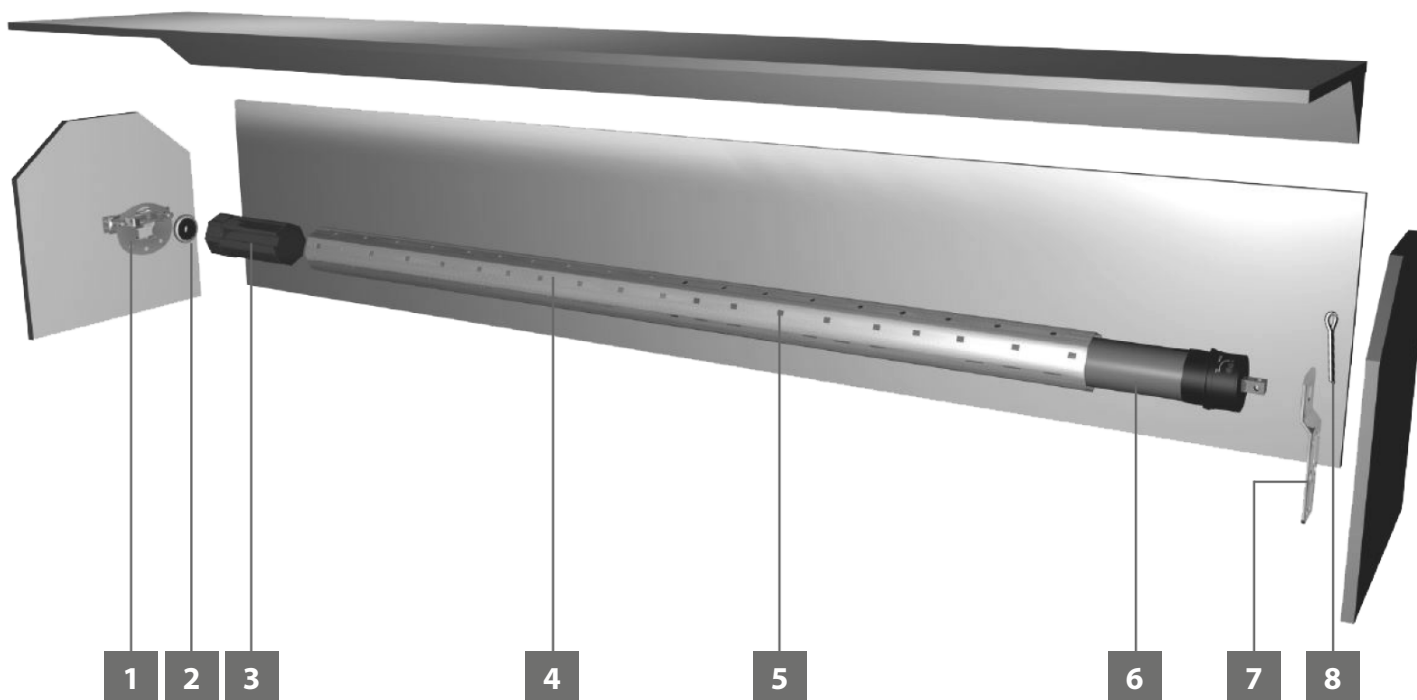
1. Read the operating instructions carefully and completely.
2. Make sure that the carrier product (roller shutter, awning) is not damaged and that it can be opened and closed without interference. If necessary, replace damaged parts.

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.

Mounting in roller shutter

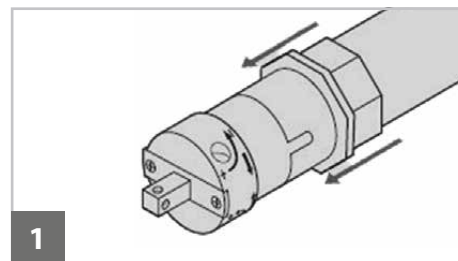
1. Lower the roller shutter completely and determine whether the motor is to be installed on the left or right side in the roller shutter box. Always choose the shortest route to the nearest junction box, as cables must not be laid in the roller shutter box.
2. The limit switch is controlled via the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



- | | | |
|-------------------------|-------------------------------|---------------------------|
| 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.

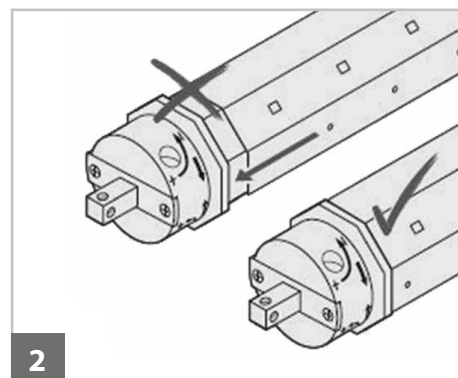


1

NOTE!

The roller capsule (counter bearing side) is usually secured with 2 opposite 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).
6. Push the motor into the roller shutter shaft until it is completely inserted with the race in the shaft (2).

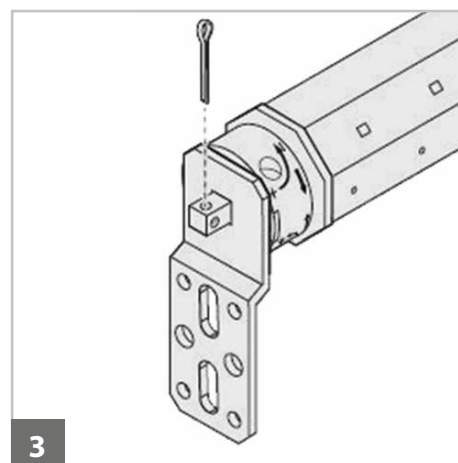


2

! ATTENTION!

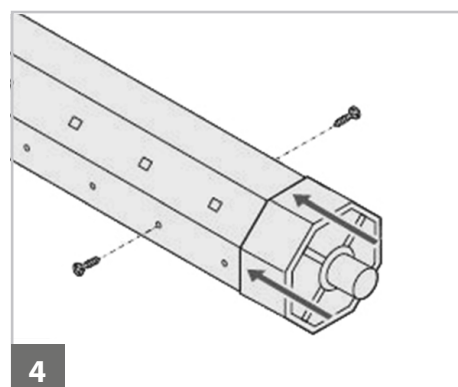
Never use a hammer when doing this!

Adapters and drivers may not slide in very smoothly, nevertheless do not hit the motor!



3

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).



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!

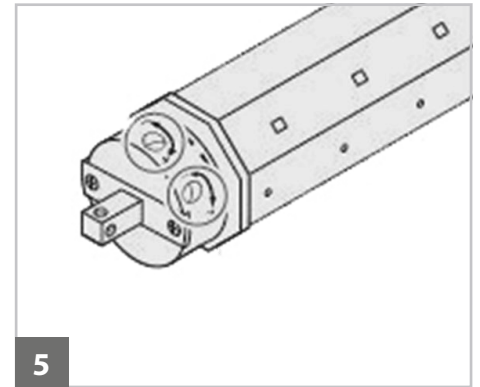
When installed, the rolled-up roller shutter must run vertically into the guide rail.

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 adjustment screws on the motor head (5) remain easily accessible!

Use steel band hangers, also called safety springs, to fasten the roller shutter to the shaft.



⚠ ATTENTION!

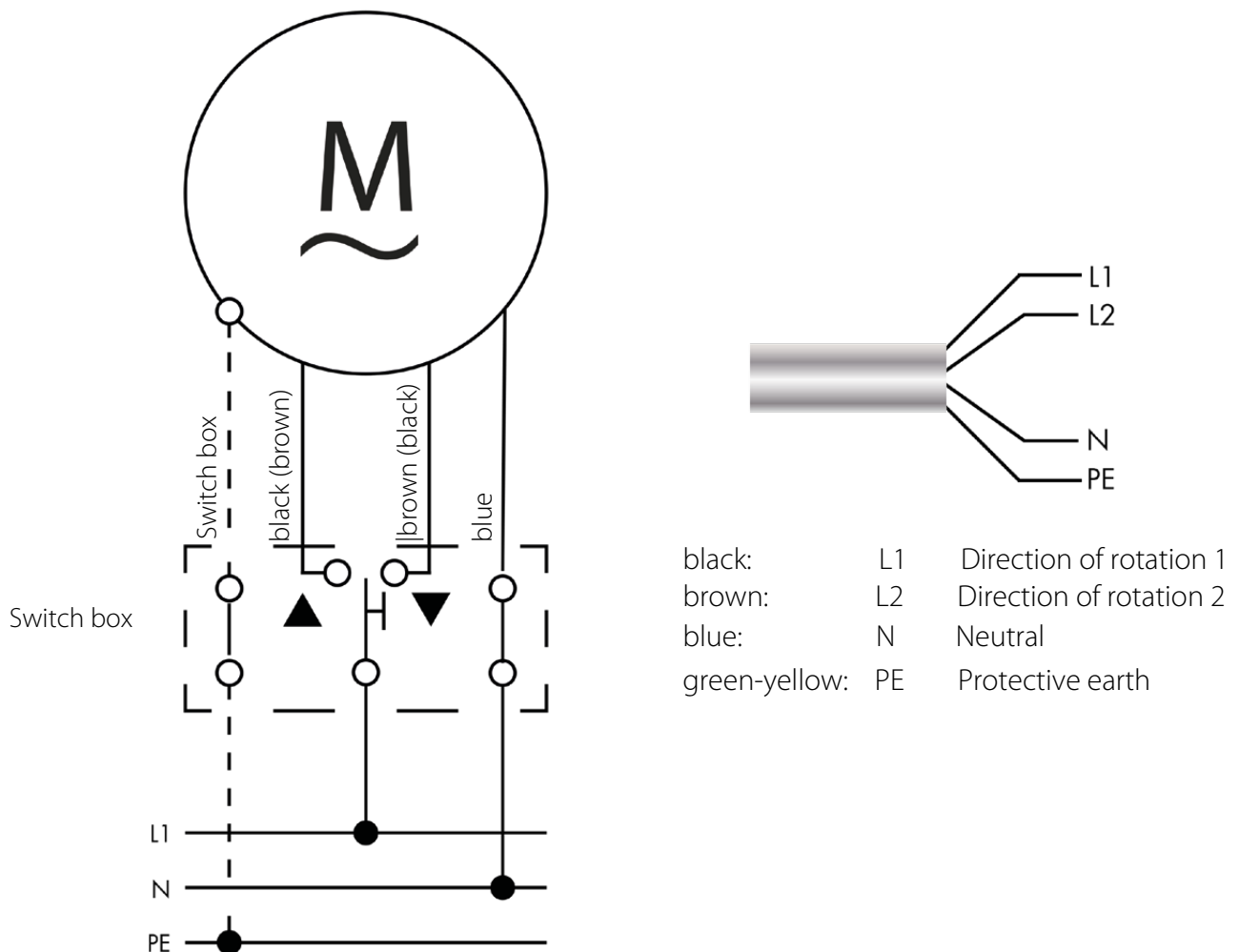
If you screw screws into the roller shutter shaft to suspend the roller shutter, please ensure that they are short enough and do not touch the motor under any circumstances!

⚠ 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 mechanical limit switches



⚠ 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 (left/right) of the motor 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.

⚠ ATTENTION!

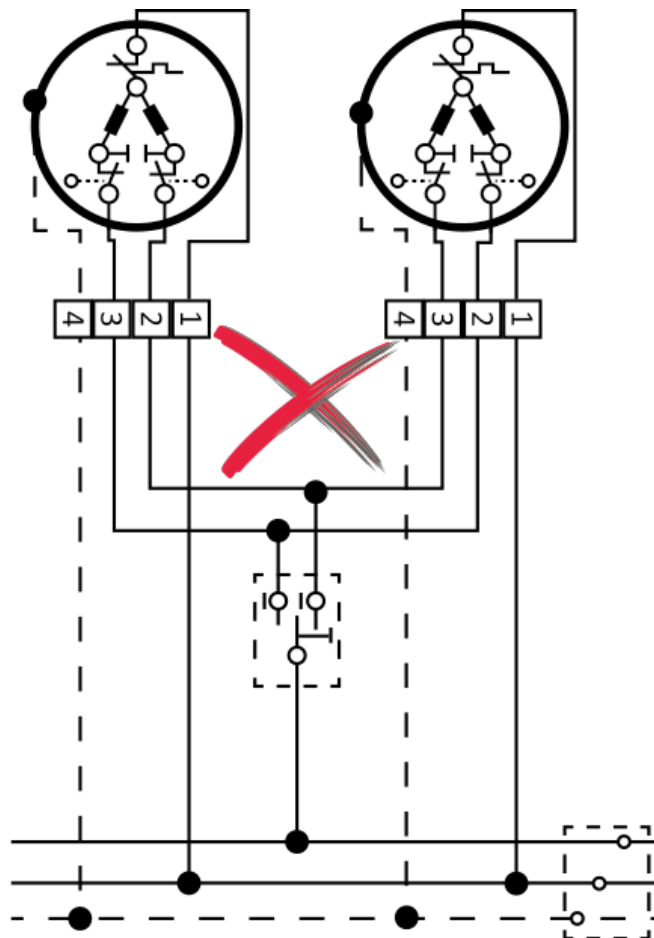
Switches and circuits (controls) must not allow simultaneous UP and DOWN commands! An UP and DOWN command given at the same time will cause a short circuit of the operating capacitor.

Only electrically or mechanically interlocked switches (not light switches) may be used.

⚠ ATTENTION!

An impermissible parallel connection (1) leads to the destruction of the limit switches! It must be ensured that each drive has its own switching contact for each running direction!

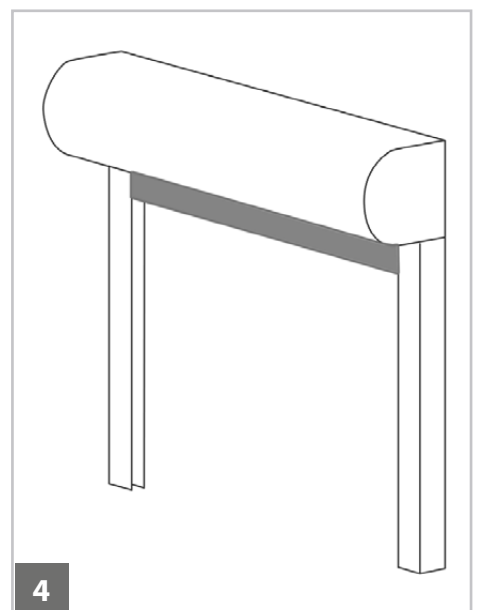
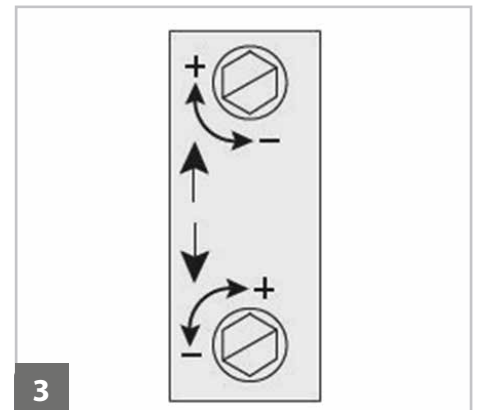
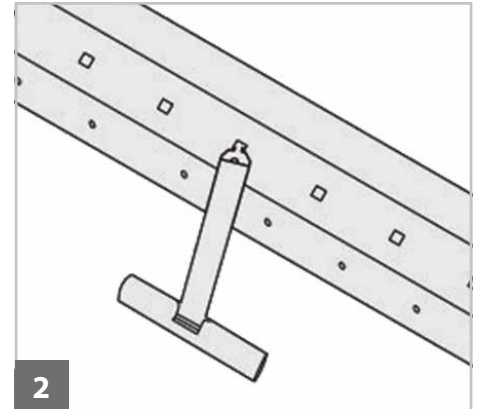
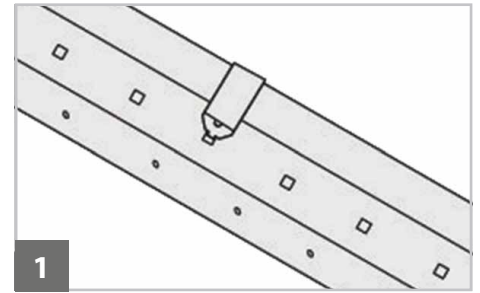
To control multiple drives with only one switch (or timer), be sure to use a motor isolating relay or suitable motor control units!



1 impermissible parallel connection

Set end positions (end points)

1. Connect the motor according to the wiring diagram (page 11) and switch on the power supply.
2. Move the shaft with the motor down via the DOWN button on the control unit until the motor switches off and the factory final setting is reached (roller shutter not yet fastened!).



The factory setting is approx. 3-5 full shaft revolutions between OPEN and CLOSE.

3. Attach the roller shutter to the roller shutter shaft (1) (2).
If the suspension openings on the roller shutter shaft cannot be reached, press the DOWN button on the control unit again and turn the adjustment pin on the upper adjustment screw (3) in the "+" direction. The shaft then moves jerkily in the DOWN direction. Turn the adjustment screw until you reach the suspension openings for the steel band hangers and can hang the roller shutter.

ATTENTION!

If the shaft does not immediately move in the DOWN direction when you turn the adjusting screw (3) to "+", you have accidentally turned the wrong adjusting screw! Turn the other adjustment screw 1-2 turns also in the "+" direction to check this.

4. Move the roller shutter in the OPEN direction.
The motor must switch off before reaching the roller shutter box. Then turn the adjusting pin on the lower adjusting screw (3) in the "+" direction.
The motor (roller shutter) now moves "jerkily" upwards. Continue turning the adjustment screw until the roller shutter has reached the roller shutter box or the desired end point.

NOTE!

The roller shutter end strip must still be visible from the outside (4).

If the shutter does not stop before reaching the shutter box, stop it with the STOP button on the control unit.

Then move the roller shutter back a little (approx. "half opening") and turn the adjustment pin on the lower adjustment screw (3) a few turns in the "-" direction.

Then move the shutter back in the OPEN direction and check that the motor now stops before reaching the shutter box.

If necessary, move the roller shutter back a little again and reduce the travel distance further by turning the adjustment screw in the "-" direction.

Then move the shutter back in the OPEN direction and make the fine adjustment.

To do this, turn in the "+" direction until the desired switch-off point is reached.

Once the shutter has reached the desired opening height, remove the adjustment tool.

Now allow the roller shutter to roll up and down completely several times as a test. If the roller shutter stops at the set end points, the limit switch setting is complete and the roller shutter box can be closed.



The arrows indicate the direction of rotation of the shaft.



The adjustment screws next to it are only responsible for this one direction of rotation.



Turn the adjusting screw in the direction of "minus" - the motor no longer moves as far in this direction.



Turn the adjusting screw in the "plus" direction - the motor moves "jerkily" in this direction.

 **ATTENTION!**

Note that the limit switches of the motor only function properly when the motor is correctly and completely inserted into the shaft!

 **ATTENTION!**

Please note that the motor is equipped with a thermal protection switch and it may happen that the motor switches off because it has reached a high temperature after a few runs. In this case, the motor will switch off automatically for safety reasons. After approx. 15-20 minutes cooling time the motor is ready for operation again.

Change end positions (end points)

Move the shutter back to the middle position and start again from the beginning.

To do this, first move the roller shutter to a "middle position" (roller shutter approx. half open).
Then turn the corresponding adjustment screw a few (5-6) turns in the "-" direction and check again,
whether the motor now stops earlier.
If necessary, start from the beginning.

In the factory, approx. 3-5 full shaft revolutions are set as limit switch range between OPEN and CLOSED.
If the motor does not stop in time, one of the adjustment screws may have been turned in the wrong direction too often.
Then unhook the shutter again and let the motor in the shaft run in the DOWN direction until it switches off automatically.

Once this is done, you can determine if you are using the correct adjustment screw for the appropriate direction of rotation by turning one of the adjustment screws in the "+" direction.
Make sure that the motor is still controlled by the control unit (press the DOWN key again).

NOTE!

If the motor travels too far up or down (does not stop when reaching the roller shutter box or the lower end point), the adjusting screw responsible for this direction of travel must be turned in the "-" direction to shorten the travel distance.

ATTENTION!

Do not perform a "test run on the table", as this will not rotate the race adapter on the motor head.

The motor then does not switch off and runs "endlessly"! This very quickly leads to overheating and shutdown of the motor by the built-in thermocouple.

It is also not advisable to turn the adjusting screws before installing the motor in the shaft, as this usually leads to an uncontrolled adjustment of the end positions set at the factory.

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.

Possible Cause:

- Thermal protection has addressed.

Solution:

- Allow engine to cool for approx. 20 minutes.

The roller shutter stops when raised - motor hums

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:

- Blocking 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 connection types.
- 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 KONFORMITÄTSEKTLÄRUNG

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_MLL-80/15_2022-01-04	(Update LVD 2022)
Brand / Marke	Rojaflex	
Model / Modell	MLL-80/15	
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 0127 Rev.00 ((LVD 2014/35/EU) 2022-01-04
T8A 088081 0073 Rev. 00 (EMV 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

Aktuelle EU-Konformitätserklärungen sind unter der folgenden Internetadresse verfügbar:
www.rojaflex.com/konformitaetserklaerungen.html

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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