

General

- Application: Drive system for roller shutters and roller blinds independent of the mains current, operation with solar energy, pre-charged ready for operation
- Power supply: Direct current (12 V) from battery pack
- No wiring necessary to the power supply or control unit
- Limit switch: Electronic with soft shutdown
- Noiseless soft brake
- Special feature: Cut-out when obstacles are detected, frost protection function, 2 intermediate positions freely definable
- End positions adjustable via elero hand-held transmitter
- Shaft size: from 50 mm Ø

Standard scope of delivery

- RolSolar drive M-868 DC, solar panel, battery pack with retaining clips, connection cable pluggable 0,27 m with reverse polarity plug connectors, assembly instructions


Accessories

- Optionally: Charger for separate charging of the battery pack, Y-cable for DC Solar-Bundle, retaining clips for battery pack.
Required: adapter sets, motor bearings, transmitters

Intended use

The battery pack was designed for use with the RolSolar drive M-868 DC to store the energy converted by the solar panel and to operate the drive. Any conversions or other modifications to the overall system are not permitted. Be careful when dealing with the overall system, especially the battery pack.

Safety instructions

General safety instructions for use including  **CAUTION** motors for roller shutters, awnings, textile sun protection and Venetian blinds can be found in the "Safety instructions" leaflet supplied with each motor. Please read the general safety instructions and this installation manual carefully as the procedure in this manual is a prerequisite for correct use of the product. Any intervention by unqualified personnel or failure to comply with warnings may lead to personal injuries or material damage.

All work on the device may only be carried out by a qualified and approved electrician. Relevant national regulations must be observed.

Figures included are for illustration purposes only. The illustrations may differ from your product in minor details and are provided for general information only.

elero GmbH continuously strives to improve all products. As a result, the specifications, features and technology of this product may be changed at any time. The information provided is based on current information at the time of publication.

Battery pack



Failure to observe the following regulations can lead to fire or explosion of the battery pack.

- Use the battery pack only for the intended purpose.
- Keep the battery pack away from heat.
- Keep the battery pack dry.
- Do not charge or use dropped or damaged battery packs.
- Do not connect the positive and negative poles of the battery pack to metallic objects.
- Only use the mains / charger supplied as an accessory when under supervision.
- Do not open the housing of the battery pack and do not make any modifications to the battery pack.
- Do not apply pressure to the battery pack in the long version in the lower area up to the beginning of the warning notice (e.g. by fastening with cable ties).

The performance of the battery pack decreases after prolonged use or frequent discharging.
Recharge possible with mains / charger available separately.

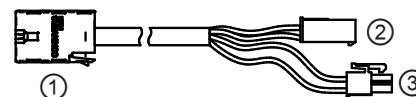
Individual components Solar-Bundle DC



- RolSolar drive M-868 DC
- Solar panel
- Connecting cable pluggable
- Battery pack

Connecting cable pluggable 0,27 m (23 395.6301)

Connection from the RolSolar drive to the power supply (battery pack and solar panel or mains/charger) with cable flag and note DC.



- ① MinPlug for the drive
- ② Drive adapter (socket) for the solar panel
- ③ Power supply plug (battery pack / mains / charger)

Y-cable type A (13 710.6801)

For simultaneously connecting the battery pack and mains / charger or 2 solar panels



Y-cable type B (13 710.6901)

For the simultaneous connection of 2 battery packs



Scope of delivery	Item number
RolSolar drive M-868 DC or RolSolar/D+ drive M-868 DC	depending on bundle
Connecting cable pluggable 0,27 m	23 395.6301
Battery pack 12 V short version mit 2 holding clamps or Battery pack 12 V long version	13 710.4802 16 307.1001 / 13 710.3802
Solar panel with 2 mounting holes or Solar panel with mit adhesive strips Wall spacer	13 124.7003 / 13 125.1903 13 125.1201
Assembly instructions Solar-Bundle DC	13 207.0001
Assembly instructions RolSolar M-868 DC or Assembly instructions RolSolar/D+ M-868 DC	13 825.0001 / 13 825 0501

Required accessories	Item number
Drive adapter sets	depending on drive head
Radio transmitter (MonoTec-868, Quin-Tec-868, MonoCom, VarioCom)	28 650.0002, 28 655.0002, 28 405.0002, 28 445.0002

Extension accessories	Item number
Solar panel (identical to scope of delivery)	
Y-cable type A	13 710.6801
Wall bracket for solar panel with mounting holes	13 125.1201
Battery pack (identical to scope of delivery)	
Y-cable type B	13 710.6901
Mains / charger with Molex connector	13 710.6701
Extension cable 0,45 m respectively 1,20 m (between battery pack and solar panel)	23 618.2001 / 23 618.2101

Assembly and commissioning

- Mounting the drive as well as deleting and setting the end positions (see guidances on RolSolar M-868 DC or RolSolar/D+ M-868 and radio transmitters).
- During initial commissioning only: the blind travels up and down briefly to signal that it is in programming mode. Transmitters can be programmed (maximum 16 pieces).

Assembly of the battery pack

- Ideally, the battery pack should be installed close to the drive.
- Installation of the battery pack including connector only inside the roller shutter case. The battery pack and connection cables must not be exposed to direct water contact. Attachment is carried out with the supplied retaining clips so that the blind or the winding is not affected.
- Attachment with the retaining clips in such a way that the curtain or the winding is not affected.

Note:

Avoid loose hanging cables. Once the plug is connected, the drive is energised and ready to use.

- Pay attention to the charge status of the battery pack.
- If necessary, charge the battery pack using the charger before installing it.
- Do not extend the connection line to / from the drive / battery pack / solar panel and guide it out of the winding area of the blind.
- Do not replace the connection cable with MiniPlug connector with an unpreassembled cable from the VariEco M DC.
- Take care to ensure the connections are correct and secure.
- Disconnect the battery pack from the drive before working on the drive or blind.
- Only connect the drive with the power turned off.

Assembly of the solar panel

- The solar panel is intended exclusively for outdoor installation. Never install it behind glass. Position the device so that it receives as much direct sunlight as possible. Avoid installing the solar panel where it can be exposed to shade. Connector plugs must not be outdoors.
- Ideally, the solar panel must be installed near the drive or on the roller shutter case.
- Attachment depending on the version either by gluing (2 double-sided adhesive pads on the back) on a smooth and greaseless surface or with 2 suitable screws / blind rivets through the existing recesses. Tighten the screws carefully but not too tight.

Note: Avoid loose hanging cables.


Programming the radio transmitter

See assembly instructions for the RolSolar drive M-868 DC (13 825.0001) respective radio transmitter

- MonoTec-868 (28 650.0002)
- QuinTec-868 (28 655.0002)
- MonoCom (28 405.0002)
- VarioCom (28 445.0002)
- App Centero home (version after 1.4.5)

Technical data and dimensions

The technical data specified is subject to tolerance factors (according to applicable standards).

Solar Bundle DC	
Dimensions of solar panel [mm] 13 125.1903 13 124.7003	455 x 60 470 x 60
Solar panel (peak) power [W]	3.8
Battery pack type	NiMH
Dimensions of the battery pack [mm] (short, without cable) 13 710.4802	250 x 29.5 x 15
Dimensions of the battery pack [mm] (long, without cable) 13 710.3802	500 x 16 x 16
Charging current	230 mA
Discharge current (recommended) [A]	maximum 4 (at 20 ° C)
Rated voltage battery pack [V]	12.0
Capacity battery pack [Ah]	2.1
Battery pack nominal charge [Wh]	25.8
Ambient operating temperature [°C] based on operation	-10 to 60 normal charges 10 to 45 quick charges -20 to 60 driving mode -20 to 35 storage
Protection class (IP code) Battery pack / Solar panel	x4 / 67
Protection class III	
Charger specifications	Item no. 13 710.6701 s. Type plate
Specification RolSolar M-868 DC RolSolar/D+ M-868 DC	See Instructions 13 825.0001 13 825.0501

Disposal / Notes on environmental protection

Electrical and electronic devices may not be disposed of with household waste. The consumer is legally obliged to return electrical and electronic equipment as well as batteries / rechargeable batteries to the designated public collection points or to the retailer at the end of their service life. The applicable regulations are governed by the relevant local laws. The symbol on the product, the instruction manual or the package indicates the applicable regulations. After using the rechargeable battery for the final time, protect the battery pack against short circuits. By recycling or reusing old units/batteries, you are making an important contribution to protecting our environment.

EU Conformity

elero hereby declares that this product is in compliance with the essential requirements and other relevant provisions of European directives that are applicable in Europe. A declaration of conformity is available on the website www.elero.com/downloads-service.

Manufacturer's address

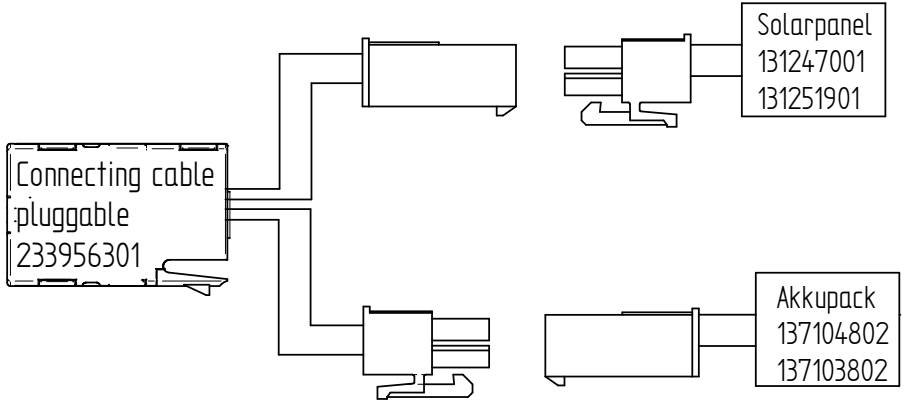
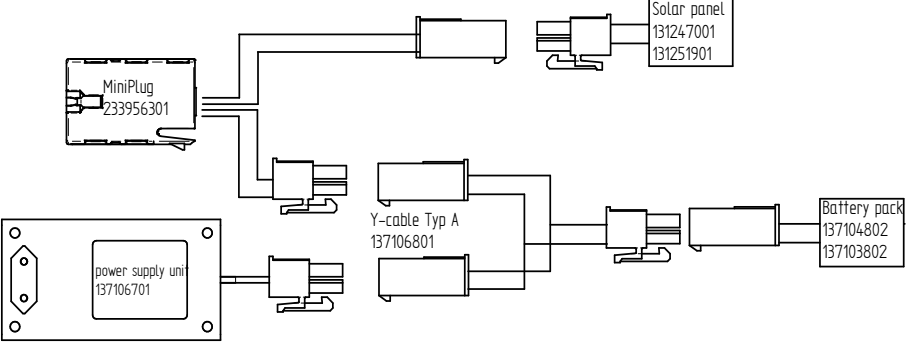
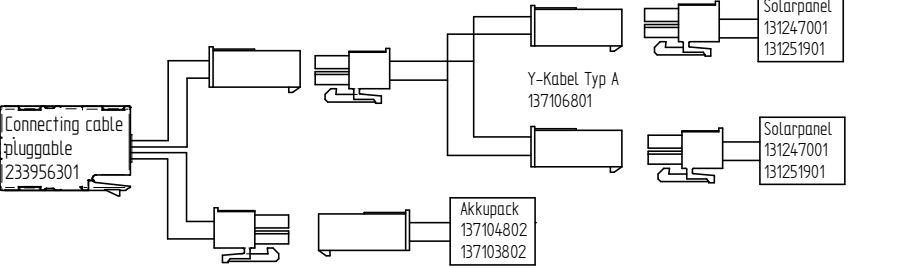
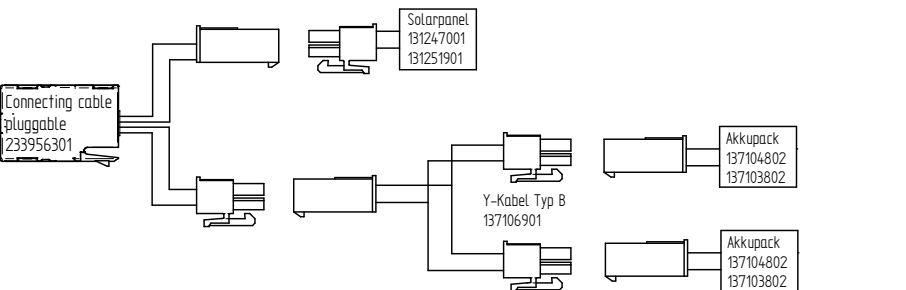
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Service

If malfunctions occur or the device is damaged despite correct handling, contact your contractor or dealer.

Operating modes based on expansion level

- It is always operated with 1 RolSolar M-868 DC (or Rolsolar/D+ M-868 DC), optionally with 1 battery pack and / or 1 additional solar panel.
- Attach a maximum of 1 extension cable (23 618.2001 or 23 618.2101), only between solar panel and battery pack.
- Connection diagrams and optional accessories (except extension cable) according to the following overview:

Standard scope of delivery • and additionally ...	Connection diagram
Standard scope of delivery (see page 1)	
<ul style="list-style-type: none"> • External charging option without having to reconnect with mains / charger (13 7106701) • Y-cable type A (13 7106801) 	
<ul style="list-style-type: none"> • Second solar panel (13 124.7003 or 13 125.1903) • Y-cable type A (13 710.6801) 	
<ul style="list-style-type: none"> • Second battery pack (137104802 or 13 710.3802) • Y-cable type B (13 710.6901) 	

Operating modes based on expansion level

<ul style="list-style-type: none"> • Second solar panel (13 124.7003 or 13 125.1903) • Second battery pack (137104802 or 13 710.3802) • Y-cable type A (13 710.6801) • Y-cable type B (13 710.6901) 	
<ul style="list-style-type: none"> • NOTE: This mode of operation with external mains/charging unit is not permitted! 	

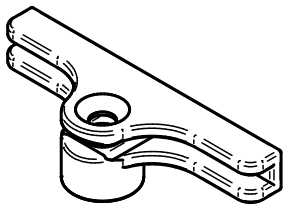
Figures



Battery 12 V, short design



Battery 12 V, long design



Wall bracket (spacer) for solar panel with mounting holes (13 125.1201)

Battery pack



CAUTION

Warning of dangers from charging batteries.

- Do not apply pressure to the battery pack in the long version in the lower area up to the beginning of the warning notice (e.g. by fastening with cable ties).

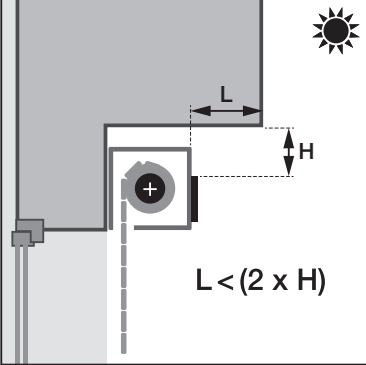
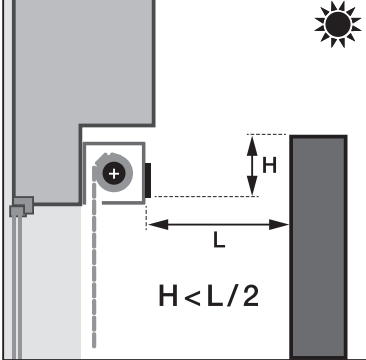
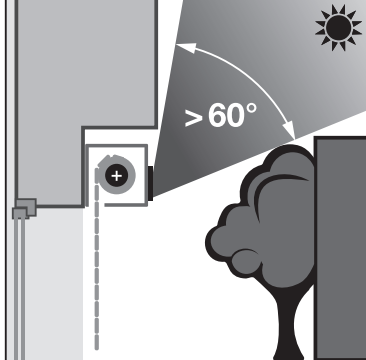
Installation instructions

The solar panel of the RoSolar system must not be shaded and must receive sufficient surrounding light. Depending on the type of motor used, adjust the power of the solar panel. Use the appropriate number of solar panels according to the following table.

Motortype	Orientation			
	SOUTH	EAST	WEST	NORTH
RoSolar (/D+) M10-868	1	1	1	1 resp. 2 *
RoSolar (/D+) M20-868	1	2	2	2

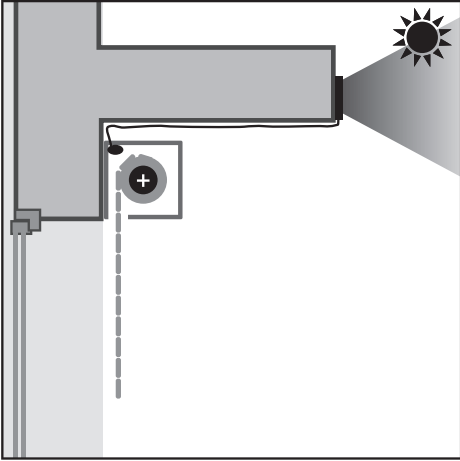
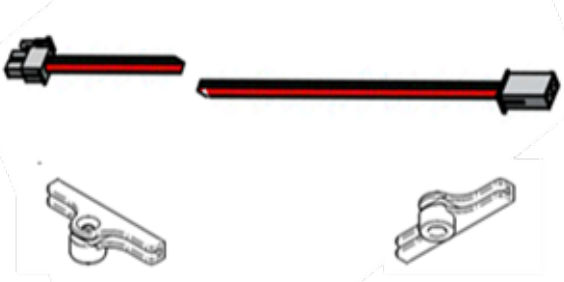
* Use 2 panels in case the shutter surface is above 3 m².

Assembly instructions

<p>1 Roof overhangs or similar structures</p> <ul style="list-style-type: none"> • Ensure that the solar panel has an unobstructed orientation to the sky. We recommend an overhang less than the double of the distance towards the roof overhang. 	 <p>$L < (2 \times H)$</p>
<p>2 Obstacles opposite the solar panel</p> <ul style="list-style-type: none"> • Obstacles directly opposite the solar panel do reduce the solar efficiency of the system. For sufficient charging performance, we recommend a minimum distance according the picture shown beside. 	 <p>$H < L/2$</p>
<p>3 Limited view of the sky</p> <ul style="list-style-type: none"> • Obstacles and overhangs often occur in combination. In such a case, make sure that the unobstructed visibility angle to the sky is at least 60°. 	 <p>$> 60^\circ$</p>

Improving the solar performance

If the local conditions are insufficient to mount the solar panel correctly, you can make the following corrections.

<p>1 Move the solar panel to the front of the building</p> <ul style="list-style-type: none"> If there is too much overhang, e.g. due to a balcony, you can move the panel to the front edge of the balcony. elero offers extension cables in various lengths for this purpose. Ask your elero partner for support. 	
<p>2 Reallocate the solar panel to optimized position</p> <ul style="list-style-type: none"> If the panel is completely shaded, it can be moved to another building front. For this purpose, elero offers extension cables in various lengths. For mounting on plaster, use the available wall spacers for the solar panel. Ask your elero partner for support. 	
<p>3 Double the solar power</p> <ul style="list-style-type: none"> elero solar systems can be operated with two solar panels. If the solar performance is not sufficient despite all optimization measures, a second solar panel can be installed to increase the solar performance. Ask your elero partner for support. 	