MANUAL B-12-LFP

VOLL® LIFEPO4 BATTERY

1. INTRODUCTORY INFORMATION

1.1 GENERAL DESCRIPTION

The VOLL® Solar System 12 consists of a left-hand and right-hand solar panel (SP-12-Pro-L or SP-12-Pro-R) with charging port, a battery (B-12-LFP) and a charger (C-12-LFP). The solar panel can be used with a wide range of 12 V solar motors. The captured sunlight is converted into electrical energy by the solar panel and can be stored by the battery, allowing the solar motor to operate autonomously. If the battery runs empty, it can be recharged via the charging port on the solar panel using the appropriate charger. The charging port must always point downward, therefore a left and a right variant of the solar panel is available.

1.2 SCOPE AND INTENDED USE

The battery can be used as a power supply for 12 V solar motors. The electrical energy generated by the solar panel can be stored by the battery. The battery must be recharged by connecting the charger. Modifications to the system are not permitted. Operate with care.

1.3 LIABILITY

- Read this manual carefully before installing and using this product.
- The battery must be installed by a professional installer of drive and automation systems in accordance with VOLL® instructions and the applicable regulations in the country of use.
- Any use of this product outside the scope described above is prohibited. Failure to comply with the instructions in this manual will void VOLL®'s warranty and liability.
- The installer must inform the customer of the conditions for use and maintenance of this product and, after installation, hand over the relevant instructions for use and maintenance. Service work may only be carried out by an authorised installer.
- VOLL® strives to continuously improve all products; therefore specifications, applications and technologies mentioned in this sheet may be changed at any time. The information provided in this sheet is based on the information known at the time of publication of this manual. No rights can be derived from the information, schematic drawings or images in this manual.

If in doubt about installation or for additional information, contact a VOLL® dealer or visit voll-energie.nl.

2. SAFETY INSTRUCTIONS

- Use only for the scope and purpose described in section 1.2.
- Keep out of the reach of children.
- Do not expose the battery (cells) to heat or fire.
- Do not disassemble, open or modify the battery (cells).
- Do not damage the battery (cells).
- Do not short-circuit the battery (cells).
- Do not connect the positive and negative terminals of the battery (cells) with metal objects.
- Charge the battery only with the VOLL supplied solar panel or external adapter.
- Do not charge a damaged battery.
- Disconnect the battery by holding the connector itself, not by pulling the cable.
- If the battery makes noise, overheats or leaks, discontinue use.
- If a battery (cell) leaks, avoid contact with the liquid. If contact occurs, rinse the affected area with running water and consult a physician.
- Connect the battery only according to the wiring diagram described.
- The battery must be charged before being put into service.
- After long periods of storage, the battery must be recharged before being put into service.
- Recycle the battery only according to the method described.

3. INSTALLATION

3.1 CONNECTION CONDITIONS

- The professional installer of drive and automation systems who installs the solar panel must strictly follow the guidelines below.
- Do not drop, damage, drill into, immerse in liquid, or throw the battery into fire before, during or after installation.
- Ideally, the battery should be connected as close as possible to the motor and solar panel.
- The connection from battery to motor may only be made inside the box or housing of the awning, so that the connection is protected from direct contact with water.
- Avoid loose hanging cables as much as possible.
- Ensure that the connection from solar panel to battery, or motor, is firmly secured.
- Ensure that the battery is disconnected when installation work needs to be performed on the motor.

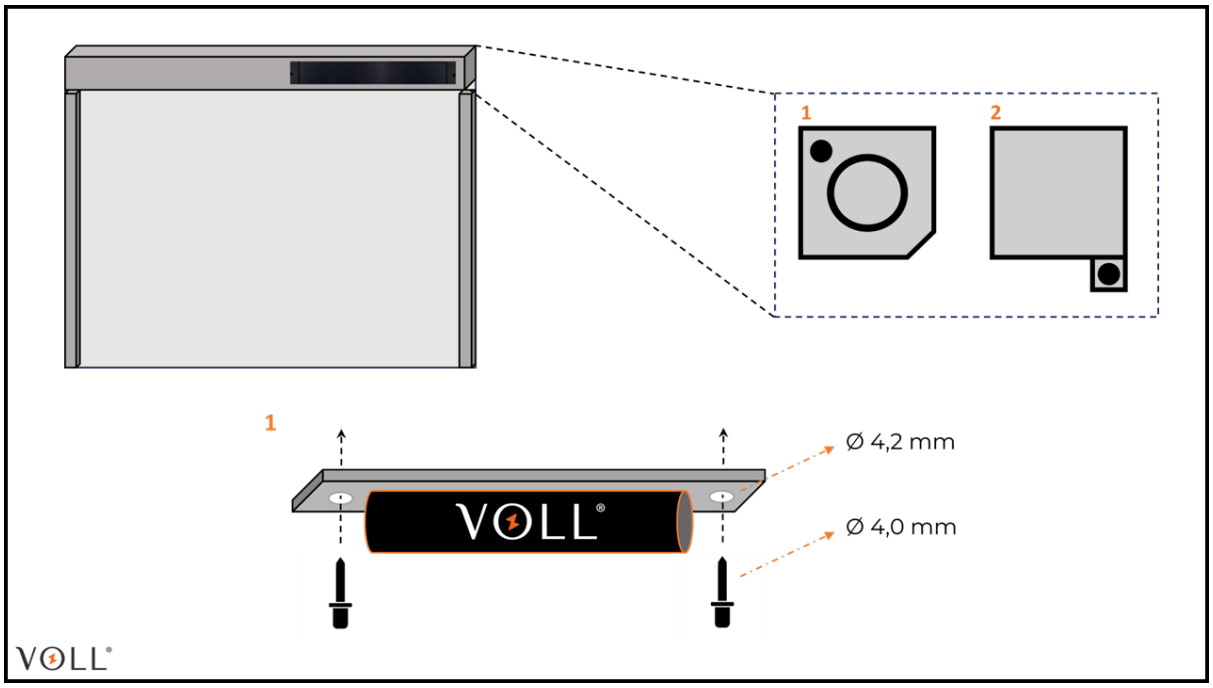
No modification may be made to the battery connector after delivery by VOLL®.

3.2 PLACEMENT

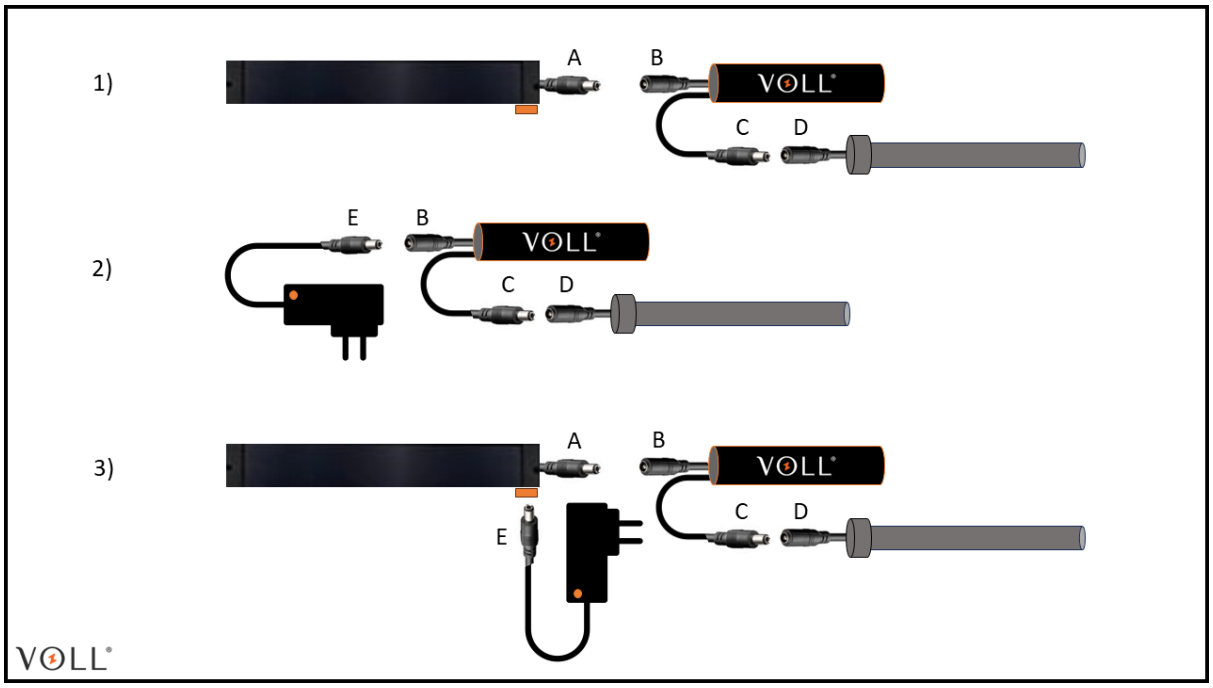
The battery can be mounted near or in the headbox of the awning in two different ways:

1. In the headbox of a roller shutter using pop rivets (Ø 4.0 mm) through the holes in the aluminium mounting strip (Ø 4.2 mm)
2. In the extended headbox of a screen

The battery must always be placed on the same side as the solar panel and motor.



3.3 WIRING DIAGRAM



A = DC3.5×1.351-M B = DC3.5×1.35-F C = DC5.5×2.1-M D = DC5.5×2.1-F E = DC3.5×1.35-M

The battery has several connection options:

1. The battery is connected via C to D of the motor. The solar panel is connected via A to B of the battery.
2. The charger is connected via E to B of the battery. The battery is connected via C to D of the motor.
3. The charger is connected via E to the solar panel. The solar panel is connected via A to B of the battery. The battery is connected via C to D of the motor.

4. MAINTENANCE, STORAGE AND RECYCLING

4.1 MAINTENANCE

A solar motor operates fully autonomously and therefore requires no maintenance, provided the solar panel is installed in direct sunlight.

If the solar panel is not installed in direct sunlight, the battery can be charged externally by connecting the charger to the solar panel.

If, after charging, the solar motor still does not operate properly, the battery may need to be replaced or the installation of the solar panel adjusted.

If in doubt about installation or for additional information, contact a VOLL® dealer or visit voll-energie.nl.

4.2 STORAGE

The battery should be stored in a cool and dry place.

Ensure the battery is disconnected from the motor and solar panel during long-term storage.

For storage up to one month: −5 °C to +35 °C. For storage up to six months: 0 °C to +35 °C.

Charge the battery to 50 % at least once every 60 to 90 days to keep it in good condition.

4.3 RECYCLING

The battery must not be disposed of with household waste. The consumer and/or installer is legally obliged to recycle the battery via a local collection point.

Separating and recycling the battery helps to protect our environment.

5. TECHNICAL DATA

5.1 DATASHEET

B-12-LFP	
Voltage	12,8 V
Capacity	3,0 Ah / 38,4 Wh
Maximum discharge current	6,0 A (2 C)
Maximum charge current	3,0 A (1 C)
Battery chemistry	Lithium ijzer fosfaat ($LiFePO_4$ / LFP)
Dimensions (L×W×H)	355x28x24 mm
Mounting strip hole Ø	4,2 mm (popnagel Ø 4,0 mm)
Weight	450 g
Operating temperature (discharge)	-20 °C tot +60 °C
Operating temperature (charge)	0 °C tot +45 °C
Storage temperature (1 month)	-5 °C tot +35 °C
Storage temperature (6 months)	0 °C tot +35 °C

5.2 CERTIFICATION

CE

VOLL B.V. hereby declares that this product complies with the essential requirements and other relevant provisions of the European directives applicable throughout the European Union, in particular the Electromagnetic Compatibility Directive 2014/30/EU and the Restriction of Hazardous Substances Directive 2011/65/EU.

In addition, this product meets the safety requirements as specified in the EN IEC 62133 standard, which describes the safety requirements for lithium-ion batteries such as the LiFePO4 technology used in this product.

The full EU Declaration of Conformity is available on request via a VOLL® dealer or at voll-energie.nl.

Ir. Jim Hazelberg, Director, 01/2025