

VOLL®



B-12-NMH

MANUAL

B-12-NMH

NMH Battery Smart 12 V 3 Ah



NIMH



NO MAINTENANCE



RECHARGEABLE

MANUAL B-12-NMH

VOLL® NMH BATTERY SMART

1. INTRODUCTORY INFORMATION

1.1 GENERAL DESCRIPTION

The VOLL® Solar System 12 consists of a solar panel (SPN-12-Smart-L/R, SPN-12-Smooth-M-L/R or SPN-12-Thin-M) and a battery (B-12-NMH). The battery replaces the original external battery of 12 V solar motors and, like that original battery, is connected directly to the motor. The sunlight captured by the solar panel is converted into electrical energy and stored in the battery, allowing the solar motor to operate autonomously. If the battery becomes depleted, it can be recharged through the charging port of a VOLL® solar panel with charging port, using the original charger of the solar motor.

1.2 SCOPE AND INTENDED USE

The battery can be used as a power supply for 12 V solar motors with a connection for an external battery. The electrical energy generated by the solar panel is stored in the battery. The battery has one connection and is connected directly to the battery connection of the motor; the solar panel is connected to the panel connection of the motor. 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 the original charger of the solar motor.
- 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 battery 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 connections of the battery and the solar panel to the motor are firmly secured.
- Ensure that the battery is disconnected when installation work needs to be performed on the motor.

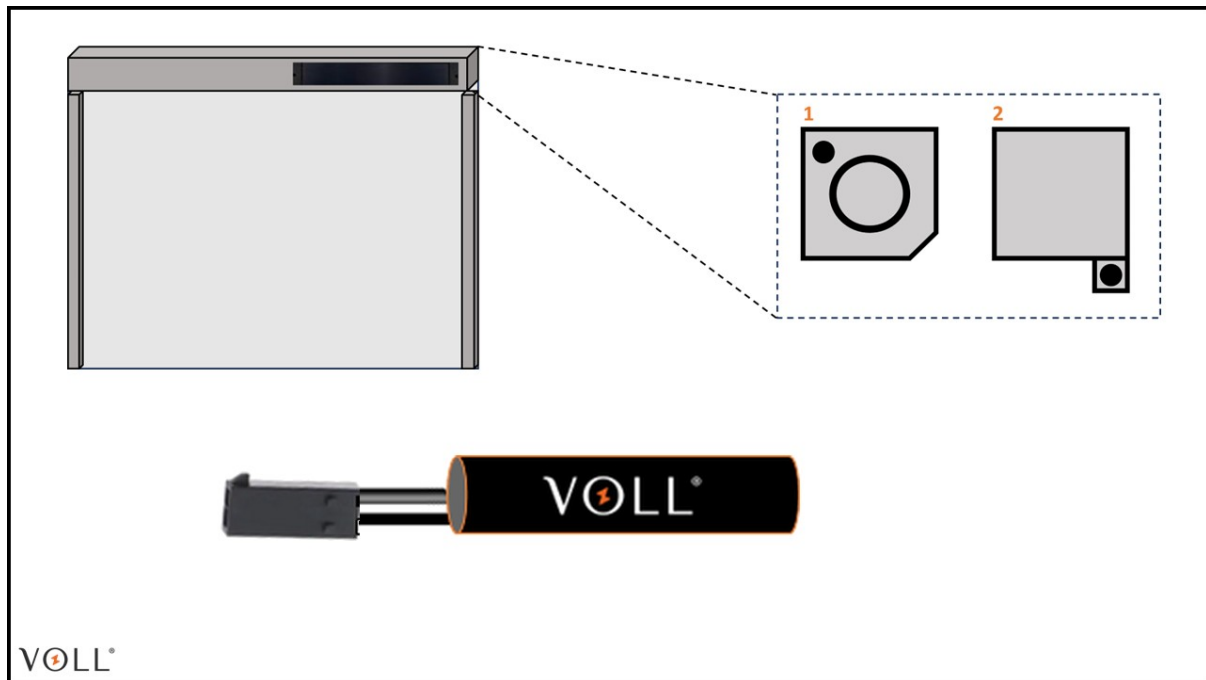
No modification may be made to the battery connector after delivery by VOLL®.

3.2 PLACEMENT

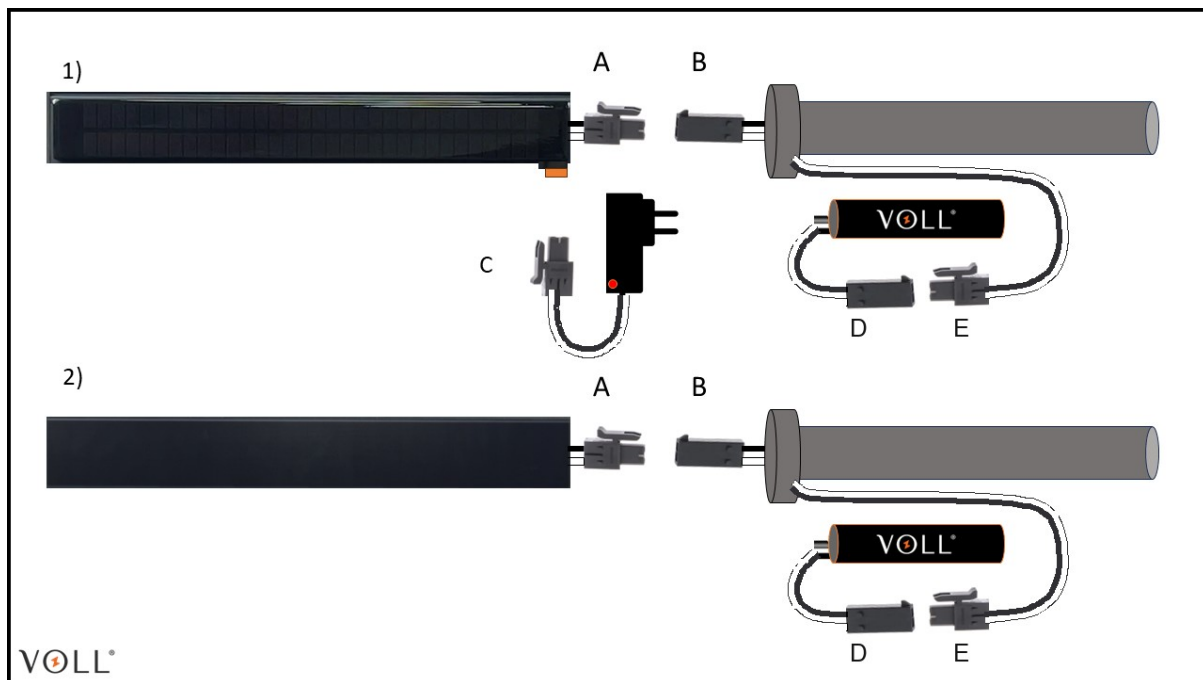
The battery is placed on the same side as the solar panel and the motor, as close as possible to the battery connection (E) of the motor:

1. In the headbox of a roller shutter, next to the motor
2. In the extended headbox of a screen

The battery has no mounting strip; make sure the battery cannot slide in the headbox and that the cable runs to the motor without strain.



3.3 WIRING DIAGRAM



A = Molex M; B = Molex F; C = Molex M; D = Molex F; E = Molex M.

The battery is connected via D to E of the solar motor. The battery can be combined with two types of solar panel:

1. Solar panel with charging port: the solar panel is connected via A to B of the solar motor. The original charger of the solar motor is connected via C to the charging port of the solar panel.
2. Solar panel without charging port: the solar panel is connected via A to B of the solar 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 original charger of the solar motor to the charging port of a VOLL® solar panel with charging port.

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.

Store the battery between -20 °C and +35 °C; for long-term storage preferably between +10 °C and +25 °C.

Charge the battery at least once every three months to compensate for self-discharge and 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-NMH	
Voltage	12 V
Capacity	3.0 Ah / 36.0 Wh
Maximum discharge current	3.0 A (1 C)
Maximum charge current	0.6 A (0.2 C)
Maximum charge voltage	14.5 V
Charging cut-off voltage	14.0 V
Battery chemistry	Nickel-metal hydride (NiMH)
Number of cells	10 (10S1P)
Dimensions (Ø x L)	26 x 438 mm
Weight	595 g
Operating temperature (discharge)	-20 °C to +50 °C
Operating temperature (charge)	0 °C to +45 °C
Storage temperature	-20 °C to +35 °C

5.2 CERTIFICATION



VOLL B.V. hereby declares that this product complies with the essential requirements and other relevant provisions of the European legislation applicable throughout the European Union, in particular the Batteries Regulation (EU) 2023/1542.

In addition, this product has been tested according to the EN IEC 62133-1 standard, which describes the safety requirements for batteries with nickel systems such as the NiMH 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, 09/2026