Original operating instructions for PROX versions

see next page

Please fully charge the battery before using for the first time!

CE

energy.case

PROX 1500 AC1000

energy.case

PROX 1500 AC300

energy.case

PROX 1500 AC UPS

energy.case

PROX 1500 DC1000

energy.case

PROX 500 AC300

energy.case

PROX 500 DC1000

energy.case

EXT 3000

Table of contents

1. General information

Contents:

- Device
- Accessories

Important information:

The device is EMC-certified according to EN55011 Class A - industrial environment. Use in residential areas must be avoided. If radio or TV reception is disrupted, the device must be placed at a greater distance from the object causing the interference.

B&W Customer Service:

Phone 05451-8946-0
Email: info@b-w-international.com

Purpose of this document:

This operating manual familiarizes the user with

- the mode of operation,
- the operation,
- the safety instructions for the device

Description of authorized users

The device is not intended for use by persons, including children, with limited physical, sensory, or reduced mental abilities, or lack of experience and/or knowledge, unless they are supervised by a person responsible for their safety and have been instructed by that person on how to use the device. Children should always be supervised to ensure that they use the device properly.

Important note:

These operating instructions are an important document that must be kept in a safe place so that you can refer to them at any time for information on the proper use of the device!

Imprint:

Junkendiek 5
49479 Ibbenbüren
Germany

2. Technical

2.1 PROX 1500 AC1000

Case type	PP - 6800 - 66 x 49 x 33.5 cm
Tightness, closed version	IP54
Tightness, hinged version	closed: IP54 open: IP20
Connections	1x 230V (Standard: Typ F)
	1x USB PD
	1x charging input
Output power	230V 1000W
	USB PD 65W
Charging power	max 350W
Charging options	230V power supply
	12V car
	24V truck
	Solar cell
MPPT for solar	Integrated
Remote control	Integrated
Weight:	33.3
Battery	1500 Wh LiFePO4
Operating temperature	-20°C to +45°C (charging and discharging)
Display	Membrane keypad
	Remote

2.2 PROX 1500 AC300

Case type	PP - 6800 - 66 x 49 x 33.5 cm
Tightness, closed version	IP65
Tightness, hinged version	closed: IP65 open: IP20
Connections	1x 230V (Standard: Typ F)
	1x USB PD
	1x charging input
Output power	230V 1000W
	USB PD 65W
Charging power	max 350W
Charging options	230V power supply
	12V car
	24V truck
	Solar cell
MPPT for solar	Integrated
Remote control	optional
Weight:	31.2 kg
Battery	1500 Wh LiFePO4
Operating temperature	-20°C to +45°C (charging and discharging)
Display	Membrane keypad

2.3 PROX 1500 AC UPS

Case type	PP - 6800 - 66 x 49 x 33.5 cm
Tightness, closed version	IP54
Tightness, hinged version	closed: IP54 open: IP20
Connections	1x 230V (Standard: Typ F)
	1x IEC
Output power	230V 1000W
	USB PD 65W
UPS power - Pass-through power	1000
Switching time	16ms
Charging power	max 350W
Charging options	230V IEC
Weight	36.6 kg
Battery	1500 Wh LiFePO4
Operating temperature	-20°C to +45°C (charging and discharging)
Display	Membrane keypad

2.4 PROX 1500 DC1000

Case type	PP - 6800 - 66 x 49 x 33.5 cm
Watertightness, closed version	IP65
Tightness, hinged version	closed: IP65 open: IP20
Connections	2x DC (500W each)
	1x USB PD
	1x charging input
Output power	24V 1000W (2x500W)
	USB PD 65W
Charging power	max 350W
Charging options	230V power supply
	12V car
	24V truck
	Solar cell
MPPT for solar	Integrated
Remote control	Integrated
Weight:	29.8
Battery	1500 Wh LiFePO4
Operating temperature	-20°C to +45°C (charging and discharging)
Display	Membrane keypad
	Remote

2.5 PROX 500 AC300

Case type	PP - 6000 - 51 x 42 x 21.5 cm
Tightness, closed version	IP54
Tightness, hinged version	closed: IP54 open: IP20
Connections	1x 230V (Standard: Typ F)
	1x USB PD
	1x charging input
Output power	230V 300W
	USB PD 65W
Charging power	max 350W
Charging options	230V power supply
	12V car
	24V truck
	Solar cell
MPPT for solar	Integrated
Remote control	Integrated
Weight:	16.5 kg
Battery	500 Wh LiFePO4
Operating temperature	-20°C to +45°C (charging and discharging)
Display	Membrane keypad
	Remote

2.6 PROX 500 DC1000

Case type	PP - 6000 - 51 x 42 x 21.5 cm
Tightness, closed version	IP54
Tightness, hinged version	closed: IP54 open: IP20
Connections	2x DC (500W each)
	1x USB PD
	1x charging input
Output power	24V 1000W
	USB PD 65W
Charging power	max 350W
Charging options	230V power supply
	12V car
	24V truck
	Solar cell
MPPT for solar	Integrated
Remote control	Integrated
Weight:	15.5
Battery	500 Wh LiFePO4
Operating temperature	-20°C to +45°C (charging and discharging)
Display	Membrane keypad
	Remote

2.7 EXT 3000

Case type	PP - 6000 - 51 x 42 x 21,5 cm
Tightness, closed version	IP65
Tightness, hinged version	closed: IP65 open: IP20
Connections	3x DC (350W each)
	1x charging input
Output power	24V 1100W
Charging power	max. 350W
Charging options	230V power supply
	12V car
	24V truck
	Solar cell
MPPT for solar	Integrated
Weight:	46,5kg
Battery	3000Wh LiFePO4
Operating temperature	-20°C to +45°C (charging and discharging)
Display	Membrane keypad

3. Explanation of symbols

The following symbol indicates a dangerous situation which, if not observed, will most likely result in serious injury or death.

The following symbol indicates a dangerous situation which, if not observed, may result in serious injury or death.

The following symbol indicates a dangerous situation that could result in minor or moderate injury if not observed.

The following symbol indicates a situation that may result in damage to the device if not observed.

The following symbol warns of dangerous electrical voltage in addition to any symbols that may already be present.

The following symbol warns of a significant tripping hazard in addition to any symbols that may already be present.

4. General safety instructions

This operating manual contains the most important information for using the device safely. The safety instructions in this section and throughout the operating manual apply to all activities carried out on and with the device. The descriptions contain safety instructions that warn of specific hazardous situations. It is very important that these instructions are always followed to protect the user.

The device must only be used for its intended purpose and in a condition that is safe to use. Any malfunctions that could compromise safety must be rectified immediately!

Intended use:

The intended use consists of using the device as a power source for all electrical consumers with a maximum power consumption and permissible operating voltage as described in the chapter "Technical data." Inductive loads must not be connected. Intended use also includes observing all instructions in the operating manual, complying with the operating and maintenance specifications, and taking foreseeable misuse into account.

Any use other than that specified above is considered improper use! Improper use may result in hazards. Improper use includes, for example, using the device as a power source for consumers with voltages and power consumption other than those specified in the chapter - Technical data - unauthorized modifications or alterations to the device, failure to observe the safety instructions, use or operation of the device other than as described, work on the device by unqualified personnel, non-compliance with general safety and operating instructions as well as occupational safety and accident prevention regulations, or disregard of legal requirements.

It is also prohibited to use the device to operate pumps that convey flammable liquids or gases and can generate electrostatic charges. This applies in particular when pumping gasoline or diesel. The device must also not be operated in potentially explosive environments where flammable liquids, gases, or dust are present.

The device must not be used to supply power to a fixed installation, such as a house. Furthermore, it is only approved for operating a single consumer.

The device's 230V charger must not be used outdoors or in damp environments; the device's 230V socket must only be used when completely dry and in a completely dry environment. The device may only be connected to fully functional consumers with all safety devices in perfect working order. In particular, the cables and plugs of a consumer should be checked before each use! No objects may be inserted into the connection holes of the device's 230V socket!

Touching parts that are still under residual voltage poses a risk of a slight electric shock, which in turn can lead to secondary accidents due to shock. Avoid touching the plug contacts after the 230V charger has been disconnected.

The device must not be used to operate inductive loads! These include, for example, relays, coils, and electromagnets. Failure to comply may result in the inverter failing!

5. Warranty and liability exclusion

Warranty claims and liability claims are excluded for personal injury and property damage if they are attributable to one or more of the following causes:

- improper use of the device
- improper installation, commissioning, or operation of the device
- Operation of the device despite defective safety devices or improperly installed or non-functional safety and protective devices
- Failure to observe the instructions in this operating manual regarding transport, start-up, use, repair, or disassembly/disposal
- Unauthorized structural modifications to the device
- improperly performed repairs
- Disasters caused by foreign objects and force majeure

6. Maintenance, troubleshooting, and repair

The device should be cleaned regularly or as required, taking particular care to ensure that the device and all connections are properly closed! A soft, damp but not wet cloth with a little washing-up liquid is recommended for cleaning.

When cleaning, make sure that the device is always switched off and disconnected from the 230V charger! There is a risk of fatal electric shock!

It is strongly recommended that the device be serviced regularly, but at least once a year, by the manufacturer! Especially when using ventilated Energy.Cases in dusty environments, harmful contamination can occur inside the device.

Malfunction or malfunction messages:

1. The red LED in the center of the warning lights is lit continuously
2. The red LED in the middle of the warning lights flashes
3. The battery level drops very quickly
4. The device no longer emits any power
5. The device can no longer be charged
6. The device has switched off after connecting or operating a consumer
7. The device has switched off during operation and an acoustic signal sounds repeatedly in the form of a sequence of five tones.
8. The remote control does not connect and the blue Wi-Fi symbol is permanently displayed

Troubleshooting:

1. The device is too hot to operate: Switch off the device using the main switch, disconnect it from all charging devices and connected consumers, and leave it to cool down in a cool place.
2. The device is too hot to charge: Switch off the device using the main switch , disconnect it from any charging devices and connected consumers, and allow it to cool down in a cool place.
3. Charge the device completely and disconnect the charger at least 8 hours after the battery indicator shows 100%.
4. Perform step 3.
5. Perform step 1 or use a different charger.
6. Disconnect all connected devices from the device, switch it off, and restart it after at least 1 minute. If this does not work, the power requirement of the connected device is too high and it cannot be operated on the device.
7. The device's inverter is overheated and has shut down. Switch off the device and allow it to cool down.
8. While the energy.case is switched on (!), switch off the remote control by double-clicking the red button on the side and switch it back on after five seconds by clicking the red button on the side once.

   Note: If the fault cannot be rectified, contact the manufacturer immediately.

Repairs may only be carried out by B&W International specialist personnel or by third-party specialists instructed by B&W International! There is also a risk of injury from using unauthorized replacement parts. Incorrect or faulty replacement parts can lead to damage, malfunctions, or total failure and impair safety. In general, check the device for defects before each use, switch off the device immediately if there are any defects, and arrange for the necessary repairs. Furthermore, please note that the warranty for the safety and function of the device provided by B&W International GmbH will be void if: replacement parts that do not correspond to the original parts are installed in the device, repairs are carried out by unqualified personnel, the device is not positioned correctly during operation or storage, or other instructions in this operating manual are not observed.

7. Operation

7.1 Permissible environment

First, ensure that the environment is suitable for operating the device. The surface on which the device is placed must be level and stable. The ambient temperatures must be between -20°C and +40°C and the environment must not be explosive. The device must also not be operated in environments with particularly fine dust. In addition, ensure that the device is always laid flat and not stood upright.

Warning: Risk of injury to legs or feet: The device may tip over or fall from a table or similar raised surface, causing injury to legs or feet.

The device must never be placed in direct sunlight, especially for long periods of time. Uncontrolled overheating can cause serious damage to the batteries.

The device may only be operated if all fixed protective devices are properly installed. This includes the housing itself, all correctly installed additional insulation for cables and wires, and the separate contact protection for electrical components inside. All components, including protective devices, must always be in perfect condition. Safety signs on the device must not be removed and must be replaced immediately by qualified personnel from B&W International GmbH or appropriately trained external personnel if they are damaged or dirty. Protective devices must not be removed or disabled under any circumstances!

7.2 Charging the device

With the exception of the energy.case UPS, the energy.case can be charged using various energy sources. The system automatically regulates the optimal parameters and power to prevent, for example, the car battery from being deeply discharged when charging via a cigarette lighter in a car. However, it must be noted that the charging power varies, as certain systems can deliver less energy than others. As a result, charging via a car cigarette lighter takes significantly longer than charging with the 230V charger.

Charging with the 230V charger:

The 230V charger is the fastest way to charge the device. It is best for the battery if the device does not consume any energy during charging.

The 230V charger must only be used in a completely dry environment!

The device must never be left unattended during charging!

To prevent damage to the battery, the device should be discharged to approx. 10% at least once a month and then fully charged using the charger supplied!

Charging in a car or truck

The device can also be charged in a car using the separately available car charging cable. When charging via a cigarette lighter in a car, the system automatically monitors the car battery and thus prevents it from being deeply discharged. However, it should be noted that the charging power varies, as certain systems can deliver less energy than others. As a result, charging via a car cigarette lighter takes significantly longer than charging with the 230V charger.

Vehicles can get very hot! The permissible operating temperatures must be observed at all times.

The device must never be left unattended during charging!

To avoid damage to the battery, the device should be discharged to approx. 10% at least once a month and then fully charged using the charger supplied!

Charging with a solar cell

The device can also be charged with a solar cell. When setting up the solar cell, it is also essential to ensure that the surface of the solar cell is free of dust and dirt and that no shade falls on the solar cell, as even a very small shadow significantly reduces the solar yield. When using solar cells, the energy.case must not be placed in direct sunlight.

The device must never be left unattended during charging!

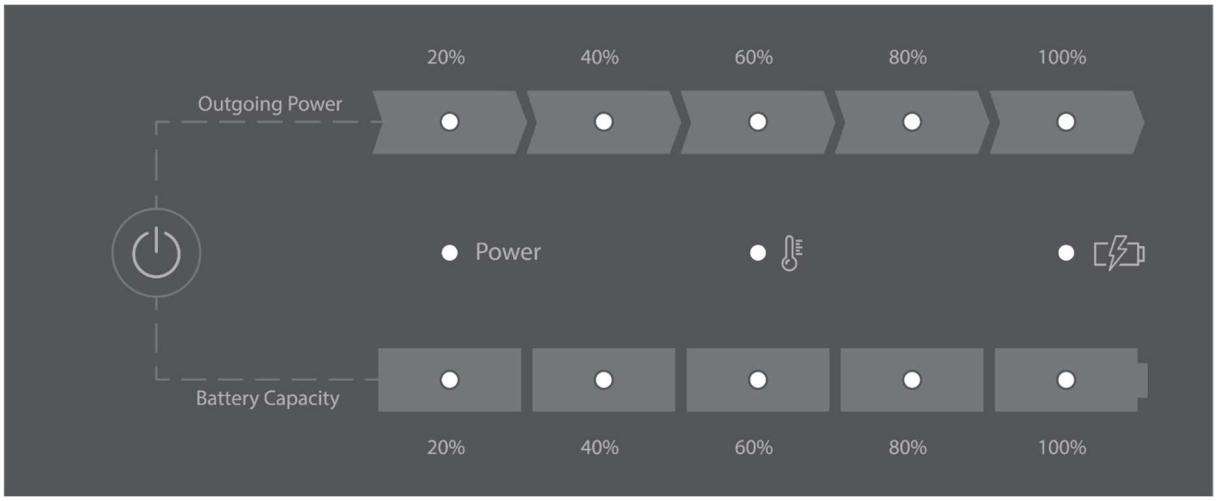
To avoid damage to the battery, the device should be discharged to approx. 10% at least once a month and then fully charged using the charger supplied!

Cables connected for power consumption by external devices or for charging the device's batteries can cause tripping hazards. Care must be taken to ensure that they are laid safely!

7.3 Control panel of the membrane keyboard

The device has various simple status and warning lights, see also the figure below, which provide information about the operating status during use. The following are explanations of the various displays and LEDs:

- **Green LED on connections:** indicates that voltage is present at the 230V output and that the inverter is active
- **Battery Capacity:** shows the current battery level relative to 1500 Wh in percent
- **Outgoing Power:** Shows the system load in percent relative to the maximum power
- **Power:** Entire system switched on and ready for operation
- **Temperature symbol**: Lights up when the temperature for operation or charging the device is too high
- **Battery flash**: lights up when the device is charging



7.4 Operating the remote control

Certain versions of the energy.case have a remote control with its own battery; see also the Technical Data section. The remote control can be charged in the energy.case or on any USB-C charging cable.

IF THE REMOTE CONTROL IS CONNECTED TO THE USB PORT OF THE ENERGY CASE, THE REMOTE CONTROL WILL START AUTOMATICALLY WHEN THE ENERGY CASE IS SWITCHED ON!

The remote control can be switched on and off independently of the energy.case using the red button on the side; see the following illustration.

ONE CLICK = ON

DOUBLE CLICK = OFF

Regardless of how it is started, the connection screen is displayed after the remote control is switched on. While the remote control searches for the WLAN connection to the energy.case, the WLAN symbol flashes blue. After a successful and secure connection to the energy.case, the WLAN symbol and the text below it light up green; see also the following illustration:

Once the connection to the energy.case has been successfully established, the remote control displays the main screen. **The main screen shows:**

- The **charge status** of the energy.case battery at the top
- Under **"Output,"** the current energy consumption or the current energy output
- Under **"RC Battery,"** the charge status of the remote control battery
- A green **start/stop symbol** above the left button
    - The main output of the energy.case can be switched on or off by pressing the left button.
    - Pressing the other two buttons switches to the **second screen.**

The second screen shows:

- The **temperature of** the energy.case **battery** in the top left corner
- To the right are the symbols for the various charging options. When a charging option is detected during operation, **it lights up green** and displays the current charging power below it.
- In the middle are the fields with **runtime and charging** time. Here, the current remaining runtime and charging time are calculated in real time.

Due to software limitations, runtime cannot be displayed indefinitely! A display of 99:59h corresponds to the message "Runtime is unlimited due to the current energy supply."

7.5 Preparing for operation

Before each start-up, make sure that all safety requirements are met and that the device is in perfect condition. The connected consumers must also be checked for proper functioning and safe condition.

7.6 Operation

To start the device, briefly press the main switch on the control panel with sufficient pressure. During operation, it is important to always keep an eye on the displays for the load and the current battery level. After use, the device should always be switched off to save energy and ensure safety.

Section **7.7 Variants and connection plates** provides detailed information on the different versions and the associated connection plates.

Do not use multiple plugs! The electrical safety system of the device is based on galvanic isolation from the environment. Multiple plugs can override this system!

After use, all connections and outputs must always be carefully closed with the respective caps! Otherwise, there is a risk of moisture entering the device.

If the device can be opened, the following must be observed when using it in cold environments: When moving the device from a cold to a warm environment, condensation may form inside the device. Before starting up the device, make sure that there is no condensation inside or on the outside of the device!

7.7 Variants and connection plates

The energy.case **PROX 1500 AC1000** has a 230V Typ F socket and a charging input. In addition, a green LED is installed on the connection plate, which lights up as soon as 230V is applied to the Typ F socket. See also the following illustration.

The device must always be transported, stored, and used in a horizontal position with the top facing up to prevent water from entering the ventilation openings. Make sure that the ventilation openings are not covered!

The energy.case **PROX 1500 AC300** has a 230V Schuko socket, a USB PD connection, and a charging input. The power output of the USB PD port can be found in the technical data. In addition, a green LED is installed on the connection plate, which lights up as soon as 230V is applied to the Typ F socket. See also the following illustration.

The device must always be transported, stored, and used in a horizontal position with the top facing up!

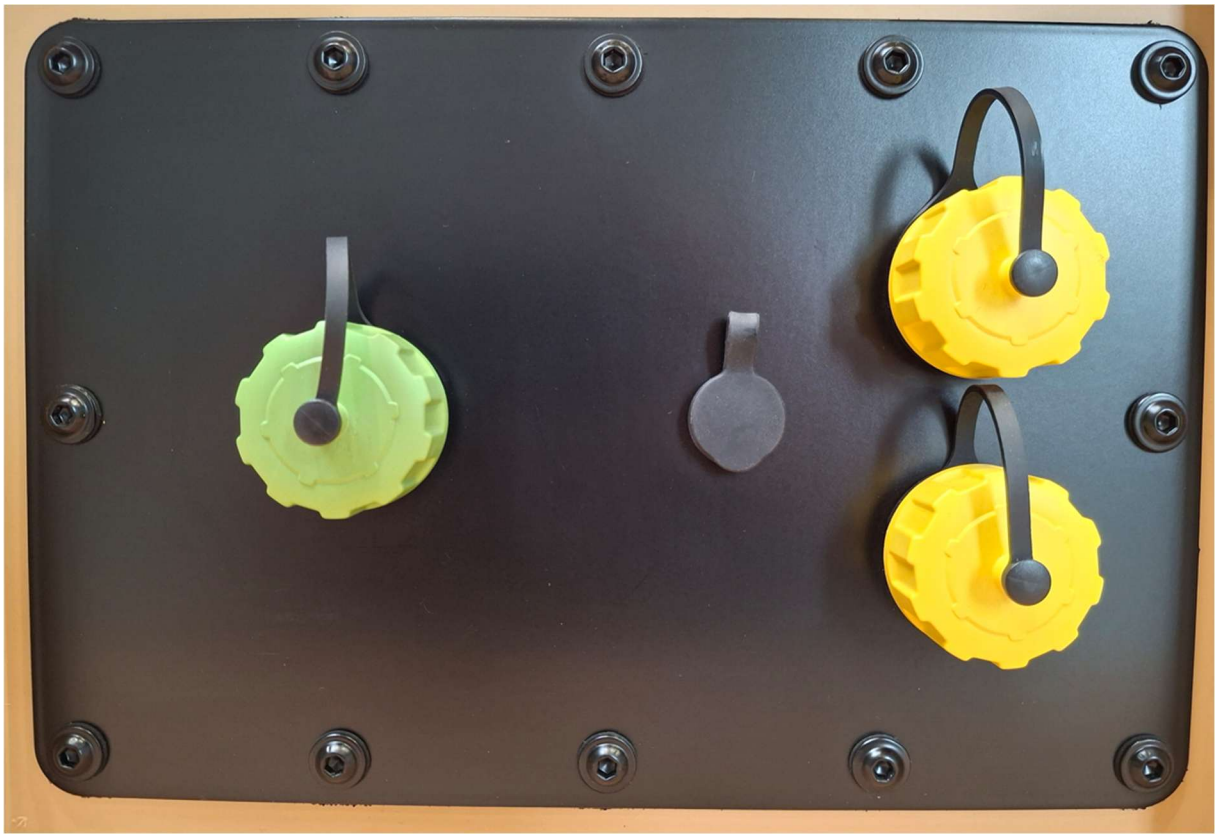
The energy.case **PROX 1500 AC UPS** has a 230V Typ F socket and a 230V IEC input. See also the following illustration. As soon as 230V is applied to the IEC input, the device's battery is charged and power is simultaneously switched to the 230V Typ F socket. As soon as the power supply to the 230V IEC input is interrupted, the device switches to the internal battery. The switchover time is 16ms.

As soon as 230V is applied to the IEC input, 230V is also applied to the Schuko socket, regardless of whether the device is switched on or off! This also applies to any use of the remote control!

The device must always be transported, stored, and used in a horizontal position with the top facing up to prevent water from entering the ventilation openings. Make sure that the ventilation openings are not covered!

Care must be taken to ensure that no moisture enters the IEC input, colloquially known as the "cold device socket," and that the cap is always properly replaced when not in use!

The energy.case **PROX 1500 DC 1000W** has two 24V and one USB PD connection and one charging input. The power of the USB PD connection can be found in the technical data. The charging input is marked with a green cap and the 24V DC output is marked with a yellow cap. See also the following illustration.



The device must always be transported, stored, and used in a horizontal position with the top facing up!

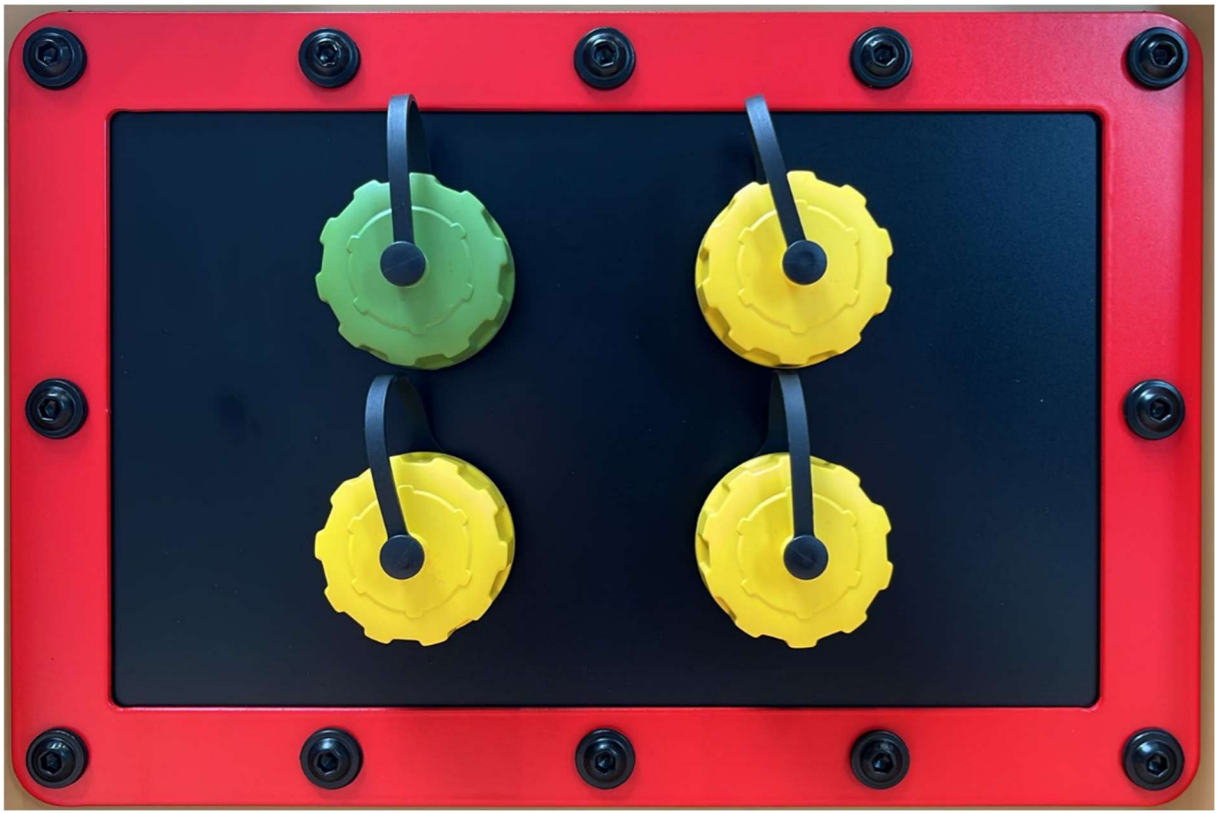
The energy.case **PROX 500 AC 300W** has a 230V Typ F socket, a USB PD connection and a charging input. The power of the USB PD connection can be found in the technical data. In addition, a green LED is installed on the connection plate, which lights up as soon as 230V is applied to the Schuko socket. See also the following illustration.

The device must always be transported, stored, and used in a horizontal position with the top facing up!

The energy.case **PROX 500 DC 1000W** has two 24V outputs and one charging input. The charging input is marked with a green cap and the 24V DC output is marked with a yellow cap. See also the following illustration.

The device must always be transported, stored and used in a horizontal position with the top facing upwards!

The energy.case **EXT 3000** has three 24V outputs and a charging input. The charging input is marked with a green cap and the 24V DC outputs are marked with a yellow cap. The EXT 3000 is intended as a storage extension and can charge up to 3 additional energy.cases.
See also the following illustration.



The device must always be transported, stored and used horizontally with the top facing upwards!

7.8 Transporting the device

The device is equipped with several handles and, if necessary, an extendable trolley handle to facilitate transport. It is generally recommended that the device always be carried by two people. When transporting the device in a vehicle, it should also be securely fastened to prevent it from slipping.

When transporting in vehicles or other means of transport, always observe the legal regulations and regional requirements!

Special care must be taken when using the trolley handle! The device must always be guided carefully and must not be pulled over uneven ground at high speed! Although the device is robustly constructed and has various damping systems, the lever action of the long trolley handle can exert considerable forces on the internal components. This can cause serious damage to the electronics.

7.9 Storing the device

The device must always be fully charged before being stored and should be fully charged using the 230V charger after six months at the latest. It should also be noted that the device may only be stored indoors and must always be securely locked during storage. All caps must also be placed on the connections.

The device may only be stored within the temperature range specified in the technical data. For storage periods longer than one month, the maximum temperature must not exceed 30°C!

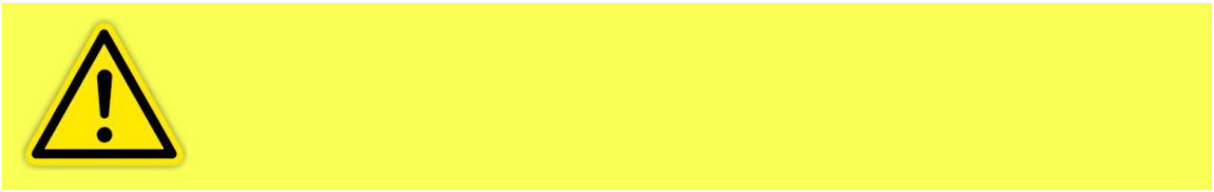
The device must always be stored in a horizontal position! Storing the device upright may cause damage to the battery chemistry in the medium term!
Store lying down, not standing up!

To avoid damage to the battery, the device should be discharged to approx. 10% at least once a month and then fully charged using the charger supplied!

8. Disposing of the device

If it is determined that the device has reached the end of its service life, it must be disposed of immediately. We will be happy to take care of the proper disposal of the device—free of charge, of course. To do so, the device must be returned to the address listed in the legal notice.

The device may only be dismantled by specially trained personnel. All safety instructions for operation must be strictly observed.



Old devices do not belong in household waste. In accordance with the Directive on Waste Electrical and Electronic Equipment (2012/19/EU) and national laws, this product must not be disposed of in household waste! This product must be taken to a designated collection point.

9. Declaration of conformity

The following guidelines have been applied:

Low Voltage Directive 2014/35/EU
EMC Directive 2014/30/EU
ROHS 2011/65/EU

The following standards were applied:

EN ISO 12100:2011	Safety of machinery – Basic concepts: General principles for the design of machinery
DIN EN 60204-1:2014	Safety of machinery – Electrical equipment of machines – Part 1: General requirements
DIN VDE 0 100	Part 100, T443 and 534 Protection against overvoltage
DIN VDE 0105-100	Operation of electrical installations
ISO 7010	Graphical symbols – Safety colors and safety signs – Registered safety signs
DIN 4844-2	Warning signs – Prohibition signs
ISO/TR 14121-2	Diagram
DIN EN 61326-1	EMC requirements for electrical measuring, control, laboratory, and laboratory equipment
DIN EN 61010-1	Safety requirements for electrical measuring, control, regulation, and laboratory equipment
DIN EN 55011 (A)	Limits and methods of measurement (emissions) of radio disturbance characteristics of industrial, scientific and medical equipment and measurement techniques (emissions) from 30 MHz to 1 GHz

The built-in LiFePo4 battery, including battery management, has been certified according to the following specifications:

UN 38.3	Test standard for safe transport, including all prescribed tests
UN 3480	Labeling in accordance with applicable hazardous goods regulations
MSDS	Material Safety Data Sheet

Information about the manufacturer

Manufacturer	B&W International GmbH Junkendiek 5 49479 Ibbenbüren