

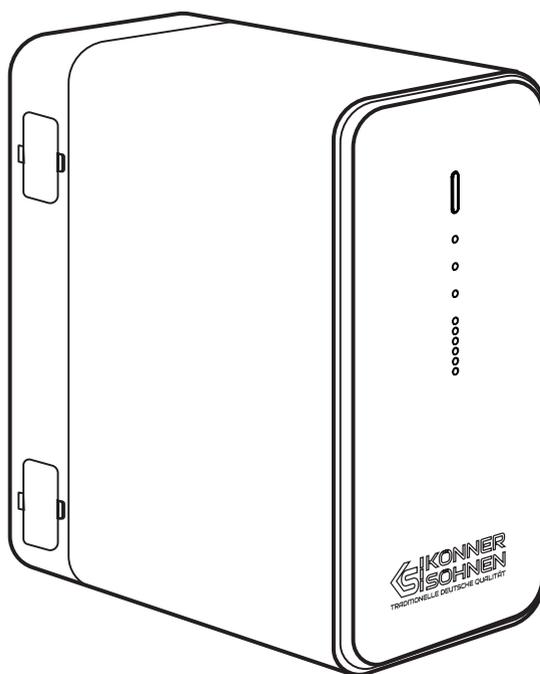
Please, read this manual  
carefully before use!

Owner's Manual



## Balcony solar systems' battery

KS 2240BSB





Thank you for opting for **Könnner & Söhnen®** products. This manual contains a brief description of safety, setup and use. More information can be found on the official importer's website in the support section: **konner-sohnen.com/manuals**

You can also go to the support section and download the manual by scanning the QR code or on the website of the official importer of **Könnner & Söhnen®** at **www.konner-sohnen.com**



*Please, read this manual  
carefully before use!*

The manufacturer of **Könnner & Söhnen®** products reserves the right to make changes that may not be reflected in this manual, namely:

- The manufacturer reserves the right to make changes in the product design, configuration and construction.
- The images and drawings in this manual are for reference only and may differ from the actual components and inscriptions on the products.

Contact information that you are free to use in case of any problems can be found at the end of this manual. All information in this manual is correct to the best of our knowledge and belief at the date of its publication. The current list of service centers can be found on the official importer's website at **www.konner-sohnen.com**



**ATTENTION – DANGER!**



**Failure to follow the recommendations marked with this sign may lead to serious injury or death of the operator or third parties.**



**IMPORTANT!**



**Useful information while operating the machine.**

## IMPORTANT SAFETY INFORMATION

1



**WARNING!**



**Please notice the following safety precautions carefully. If physical injury, loss of data, or damage is caused by failure to follow instructions, the warranty does not apply.**

- To reduce the risk of injury, close supervision is necessary when the product is used near children.
- Do not put fingers or hands into the product.
- Use of an attachment not recommended or sold by the product manufacturer may result in a risk of fire, electric shock, or injury to persons.
- To reduce risk of damage to the electric plug and cord, pull the plug rather than the cord when disconnecting the product.
- Do not use the product in excess of its output rating. Overload outputs above the rating may result in a risk of fire or injury to persons.
- Do not use the product or attachment that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion, or risk of injury.
- Do not operate the product with a damaged cord or plug, or a damaged output cable.
- Do not disassemble the product. Take it to a qualified service person when service or repair is required. Incorrect reassembly may result in a risk of fire or electric shock.
- Do not expose the product to fire or high temperatures. Exposure to fire or temperatures above 130 °C may cause an explosion.

- To reduce the risk of electric shock, unplug the power pack from the outlet before attempting any instructed servicing.
- Have servicing performed by a qualified repair person using only original replacement parts. This will ensure that the safety of the product is maintained.
- When charging a device, the product may feel warm. This is a normal operating condition and should not be a cause for concern.
- When charging the internal battery, work in a well-ventilated area and do not restrict ventilation in any way.
- Do not clean the product with harmful chemicals or detergents.
- Misuse, dropping, or excessive force may cause product damage.
- When disposing of secondary cells or batteries, keep cells or batteries of different electrochemical systems separate from each other.
- Do not use or store this product in direct sunlight for a long period, such as in a car, cargo bed, or any other place where it will be exposed to high temperatures. Doing so may cause the product to malfunction, deteriorate, or generate heat.
- Servicing of batteries should be performed or supervised by personnel knowledgeable about batteries and the required precautions.
- Do not use this product near strong static electricity or strong magnetic fields.
- Do not expose this product to flammable, explosive gas, or smoke.
- Do not stand on the product.
- Do not immerse the product in water. If the product accidentally falls into water, place it in a safe, open place and keep it away from fire until it is completely dry.

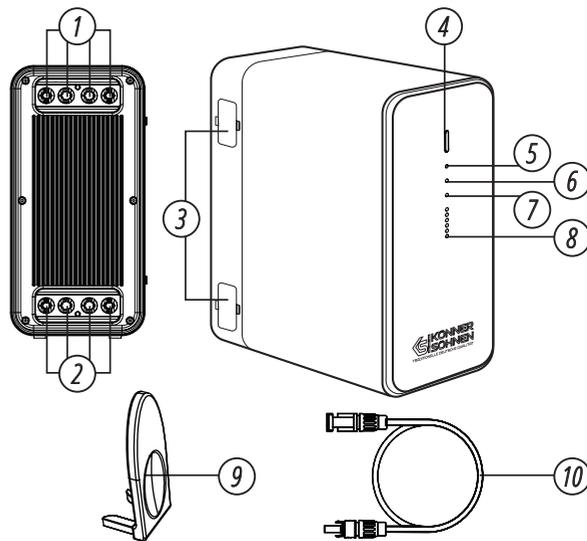
## MAIN OVERVIEW

2

1. DC MC4 Outputs
2. PV MC4 Inputs
3. Extra battery port
4. Power button
5. Status Indicator
6. WiFi&BT Indicator
7. Warning Indicator
8. Battery indicator

### THE PACKAGE INCLUDES:

- Balcony solar systems' battery KS 2240BSB
- User manual
- 9. Tools for MC4 - 1 pc
- 10. MC4 cable 3 m - 4 pcs



**IMPORTANT!**



Manufacturer reserves the right to make changes and/or improvements in design, components set and technical attributes without notice and without incurring obligation. The pictures in this manual are schematical and may not match the parameters of original product.

<b>Model</b>	<b>KS 2240BSB</b>
<b>Capacity</b>	2240Wh (5000mAh/44.8V)
<b>Cell type</b>	LifePO4 Batteries
<b>PV MC4-Input×2</b>	12-59V / 8.47A 2×500 W max.
<b>DC MC4 Output×2</b>	42-50.4V / 9.52A 2×400 W max.
<b>Input for connecting an additional battery×2</b>	at the Input 44.8-51.1V max. 35A, per Output 42V-51.1V max. 30A
<b>Maximum expansion capacity</b>	6720 Wh
<b>Cycle times</b>	≤6000 times (80% DOD)
<b>Dimensions (LxWxH)</b>	350×175×295 mm
<b>Weight</b>	18.7 kg
<b>Storage Temp</b>	-10 °C+ 55 °C
<b>Working Temp</b>	-10 °C+ 50 °C
<b>Charging Temp</b>	0 °C+ 50 °C
<b>Ptotection class</b>	IP65
<b>Protect system:</b>	overcharge protection, over-discharge protection, overcurrent protection, overtemperature protection, short circuit protection, overvoltage protection

**POWER BUTTON:**

Short press the button to turn on.  
Press the Button 10s long to turn off.

**LED DISPLAY:**

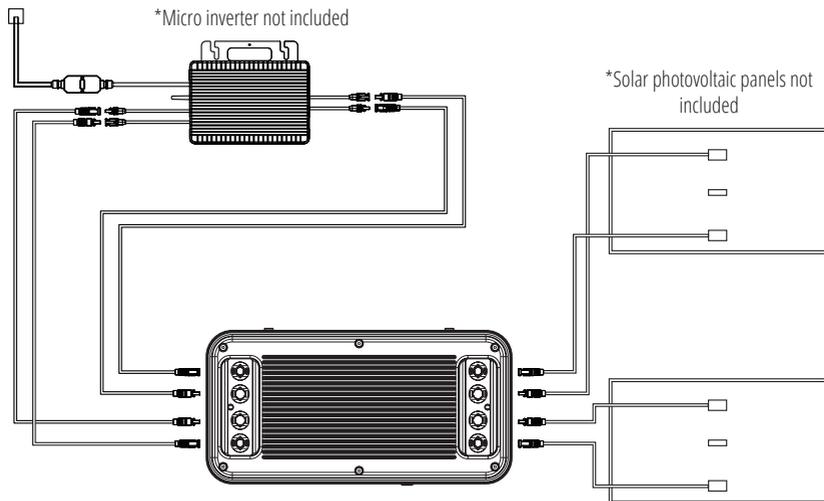
**Status indicator** - displays the ON/OFF status of the battery.

**OUT indicators** - display the output status.

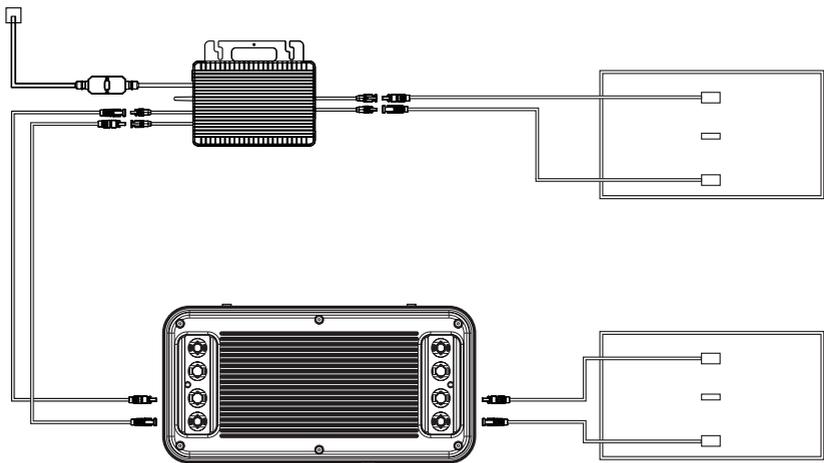
**Battery indicators:** LED indicator to show battery status.

**HOW TO USE IT:**

1. Connect the solar panel to the PV input MC4 of the KS 2240BSB.
2. Connect the MC4 microinverter input to the MC4 DC output of the KS 2240BSB.
3. Press the KS 2240BSB switch button until the power display state light up;
4. If not in use, you can press the switch button to turn off the KS 2240BSB.

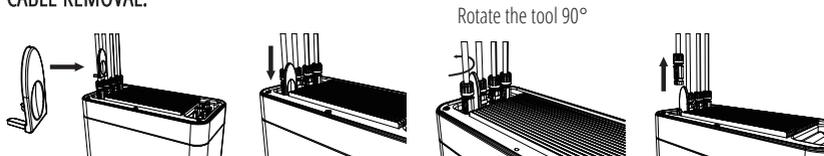


If you find that the microinverter is not functioning properly after the connection described above, please connect as follows: Connect one of the microinverter inputs to the DC MC4 Output of the battery, and the other microinverter input should either be disconnected or connected to the solar panel.



\*This issue arises from the fact that some of the microinverters available on the market have a common internal reference point. When both microinverter inputs are connected to a battery simultaneously, the microinverter will function abnormally.

### CABLE REMOVAL:



### Important Tips:

- Before connecting cables, ensure that the microinverter, solar panels, and the home grid are disconnected, and KS 2240BSB is turned off.
- Before setting the output to microinverter please confirm the rated power of your microinverter, the output to microinverter should not be greater than the rated power of your microinverter.

- The KS 2240BSB should be protected from direct sunlight to prevent rapid temperature increase.
- Please check the accessories before installation, some accessories need to be purchased separately.
- After the installation, please first download the App to check electricity produced .
- For long-term storage, charge and discharge product once every 3 months (discharge product to 20%, then recharge it to 80%).

## APP INSTRUCTIONS

5

Power Zero can connect all your devices via Bluetooth or wi-fi to track your energy use and production in real time, dynamically display the status data of the device in real time, and control the energy of the device in its own hands.

This software could be operated on gadgets with Android 6.0 and IOS12.0 or above.



### SOFTWARE INSTALLED

Scan the QR code and install the opened app on your smartphone or tablet.

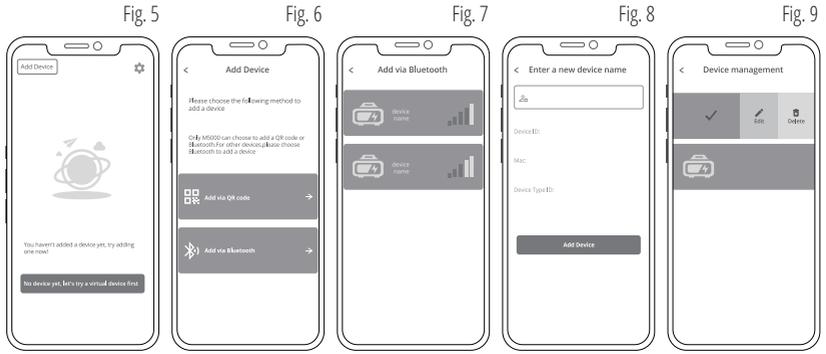
### LOGIN

- After installation, users can click the desktop icon to enter the login interface, you will enter the server switching interface when you open it at the first time (Fig. 1).
- Proceed to register an account and enter your email address (Fig. 2). A confirmation code will be sent to the email address previously provided for verification. Confirm your email in the app with the code you have just received and set a password.
- Log in with your e-mail address and the password you have chosen (Fig. 3).
- If you have forgotten your password, select “Forgot Password?” and reset it (Fig. 4).
- In the login interface click on the upper right corner – enter the server selection interface, according to different regions to choose. If you select the wrong server, the app cannot retrieve device history data.



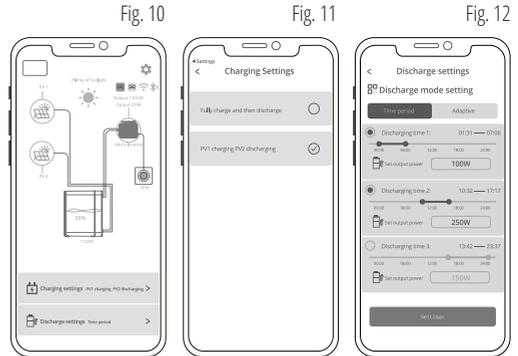
### ADDING DEVICES

- After successful login, select “Add Device” in the upper left corner to add a device (Fig. 5).
- Scan the QR code (QR code only for M5000) on your device to add the device, or open Bluetooth® on your smartphone and location sharing on the phone and select the device to add it directly (Fig. 6-7).
- Once the device has been successfully added, the name of your power station is displayed on the start page (Fig. 8).
- Clicking on different devices in the device management page will switch the connection to different devices (Fig. 9), left swipe on IOS system triggers modifying and deleting devices, long press on the device list on Android system triggers modifying and deleting devices.



**EQUIPMENT HOME PAGE**

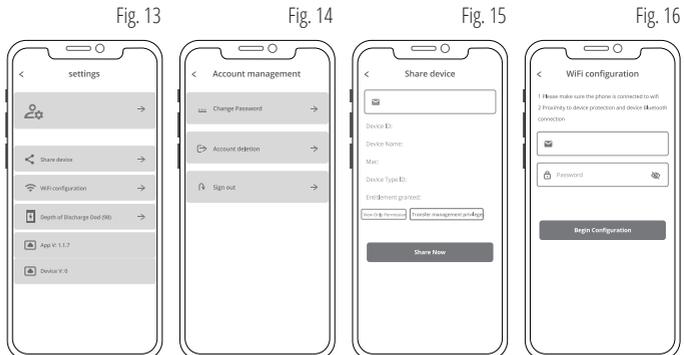
- Real-time display the solar charging status, discharge and other status (Fig. 10).
- Charging settings (Fig. 11):
  1. PV1 and PV2 charging the battery for fully charged, then discharged.
  2. PV1 charge the battery, PV2 transmitting to microinverter.
- Discharge settings: set the output mode of the product (Fig. 12).
  1. You can choose the output power of each line of KS 2240BSB through the APP.
  2. You can select the output time period of each line of KS 2240BSB through the APP.



**APP SETTINGS**

Select the settings button at the top right to change settings or get information (Fig. 13):

- Account management (Fig. 14)
- Share device (Fig. 15)
- WiFi configuration (Fig. 16)
- Deep discharge setting
- Discharge start threshold setting
- App and device information



**1. What is the battery type?**

LiFePO4 Battery.

**2. Can the product be taken on the aircraft?**

No, according to the airline transportation standards, 100Wh capacity of lithium battery can not board the aircraft.

**3. Can be charged with solar panels from a different brand?**

Yes. Please use solar panels that meet the following specifications for charging. Voltage range: 12-59VDC, Rated output power (discharging): 800W max. (Choose our solar photovoltaic products, just insert the DC port, you can easily charge the product with solar energy. This product uses MPPT (Maximum Power Tracking) technology, which can compare the output voltage point of the solar panel with the battery voltage of the product in real time, so as to find the maximum power output point that the solar panel can provide and charge the battery of the machine to obtain the best charging efficiency.

\*Actual performance is related to weather).

**4. How can I prolong the lifespan or better maintain my product that is mounted on the floor?**

If your balcony is often flooded, we recommend raising your product. This will prevent malfunctions due to prolonged soaking.

The international manufacturer warranty is 1 year. The warranty period starts from the date of purchase. In cases when warranty period is longer than 1 year according to local legislation please contact your local dealer. The Seller which sells the product is responsible for granting the warranty. Please contact the Seller for warranty. Within the warranty period, if the product fails because of defects in the production process, it will be exchanged on the same product or repaired.

All faults caused by the manufacturer during the warranty period will be eliminated free of charge. Warranty repair is carried out only if you have a fully completed warranty card, the Buyer's signature of acceptance of the warranty terms, as well as a document supporting the purchase (cash receipt, sales slip or invoice). In the absence thereof, as well as in the event of errors or corrections not authenticated by the seller's seal or illegible inscriptions in the warranty card or tear-off coupon, no warranty repair is carried out, no objections to quality are accepted and the warranty card is withdrawn by the service center as invalid. The device is accepted for repair clean and full.



# EC Declaration of Conformity

Nr. 169

The following products have been tested by us with the listed standards and found in compliance with EU Energy-related Products (ErP) directive Commission Regulation (EU) 2019/1782, EC Council Directive 2014/53/EU of Radio Equipment, Electromagnetic compatibility Directive (EMC) 2014/30/EC.

Manufacturer: DIMAX INTERNATIONAL GmbH  
Address: Flinger Broich 203, 40235 Duesseldorf, Germany  
Product: Balcony solar systems' battery "Könnner & Söhnen"  
Type / Model: KS 2240BSB

The statement is based on a single evaluation of above mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab. logo. The manufacturer should ensure that all product in series production are in conformity with the product sample detailed in this report. The applicant should hold the whole technical report at disposal of the competent all the right.

Applied EC Directives: 2014/30/EC Electromagnetic compatibility Directive (EMC)  
Directive 2011/65/EU (RoHS) as last amended by  
Directive (EU) 2015/863  
2014/53/EU EC Council Directive of Radio Equipment

Applied Standards: IEC 61000  
IEC 62619  
IEC 62109  
EN 301489-1  
EN 300328



**Issued Date:** 2023-11-20  
**Place of issue:** Duesseldorf  
**Director:** Fomin P.

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Flinger Broich 203 40235 Düsseldorf  
USt-ID DE296177274  
koenner-soehnen.com

*P. Fomin*

We DIMAX INTERNATIONAL GmbH hereby declare that specified above conforms covering European Parliament and Council Directives, 2014/53/EC of 16 April 2014 Radio Equipment Directive, Electromagnetic compatibility Directive (EMC) 2014/30/EC of 26 February 2014. The CE mark above can be used under the responsibility of manufacturer. After completion of an EC declaration of Conformity and compliance with all relevant EC directives.

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