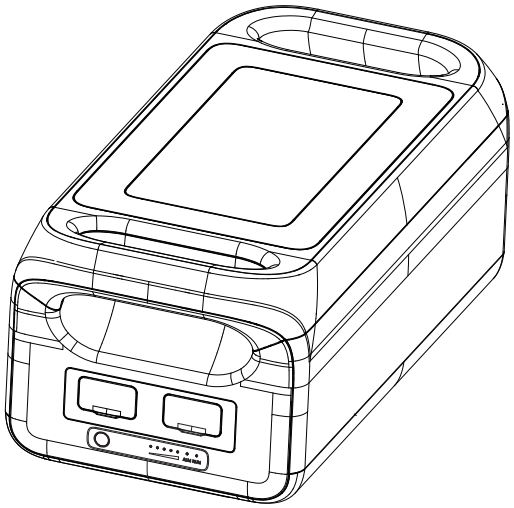
Meaningful Innovation.

INSTRUCTION MANUAL

BATTERY PACK



4000
LIFE CYCLE

02 YEAR
WARRANTY*

MODEL	VT-25001
SKU	12710

INTRODUCTION

Thank you for selecting and buying V-TAC Product. V-TAC will serve you the best. Please read these instructions carefully & keep this user manual handy for future reference. If you have any another query, please contact our dealer or local vendor from whom you have purchased the product. They are trained and ready to serve you at the best.

Caution, risk of electric shock.

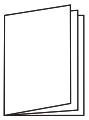
This marking indicates that this product should not be disposed of with other household wastes.

MULTI-LANGUAGE MANUAL QR CODE
Please scan the QR code to access the manual in multiple languages.

PACKAGE CONTAINS


Expansion battery pack


Expansion cable


User manual



IN CASE OF ANY QUERY/ISSUE WITH THE PRODUCT, PLEASE REACH OUT TO US AT: SUPPORT@V-TAC.EU
FOR MORE PRODUCTS RANGE, INQUIRY PLEASE CONTACT OUR DISTRIBUTOR OR NEAREST DEALERS, WWW.V-TAC.EU
V-TAC EUROPE LTD. BULGARIA, PLOVDIV 4000, BUL.L.KARAVELOW 9B

TECHNICAL DATA

- **NET WEIGHT** ≈26.6kg
- **DIMENSION** 536*270*225mm
- **NOMINAL ENERGY** 2560Wh
- **NOMINAL CAPACITY** 50Ah
- **NOMINAL VOLTAGE** 51.2V ⎓
- **WORKING VOLTAGE RANGE** 40-57.6V ⎓
- **OPERATING HUMIDITY** 10%-85%(Non-condensing)
- **ALTITUDE** <2000m

OUTPUT

- **DISCHARGE CURRENT** 70A Max.

INPUT

- **CHARGING CURRENT** 50A Max.

BATTERY

- **CELL TYPE** Lithium iron phosphate battery ($LiFePO_4$)
- **LIFE CYCLE** 4000 cycles

PROTECTION TYPE

Over temperature protection, low temperature protection, over discharge protection, over charge protection, over load protection, short circuit protection, over current protection

- Test conditions 95% DOD, 0.5C charge & 1.0C discharge at +25°C±3°C.
- IP Rating IP20

OPERATING TEMPERATURE

- Optimum ambient temperature for use 20°C~30°C
- Discharge temperature range -20°C~45°C
- Charge temperature range 0°C~45°C
- Storage ambient temperature -20°C~45°C (20°C~30°C Preferred)

Whether this product can be charged or discharged depends on the actual temperature of the battery pack.

SAFETY GUIDELINES

WARNING

1. Do not let a working expansion battery pack be close to heat sources, such as fire or heaters.
2. Do not allow the expansion battery pack to come into contact with any liquid. Do not immerse this product in water or use it in rainy or wet environments.
3. Do not use this product in environments with strong electrostatic or strong magnetic fields.
4. Do not disassemble the product in any way or pierce it with sharp objects.
5. Do not use wires or other metal objects to short-circuit the product.
6. Do not use parts or accessories that are not officially supplied. If replacement is required, please visit the official website for related information.
7. When using this product, strictly follow the ambient temperature guidelines in this User Manual. If the temperature is too high, the battery may catch fire or even explode; if the temperature is too low, the product's performance will be severely degraded, or it may not meet the requirements for normal use.
8. Do not place other heavy objects on the expansion battery pack except for the designed expansion battery packs. The stacking method of the expansion battery packs has been

designed and tested by structural mechanics. For the stacking method, please refer to Chapter 4 of this User Manual.

9. Do not block the fan by force or expose the expansion battery pack to a non-ventilated or dusty environment while it is working.
10. Avoid collisions, drops, or violent vibrations during transportation. If severe impact occurs, immediately shut down the power supply and avoid further impact.
11. If the expansion battery pack accidentally falls into water, place it in a safe, wide area and keep yourself away from it until it is completely dry. A dried battery pack shall not be used again. Dispose of it properly according to the recommendations in Chapter 2.2 of this User Manual (extinguishing equipment: water or water mist, fire blanket, dry powder, sand, carbon dioxide fire extinguisher).
12. If there is dirt on the connector of this product, wipe it off with a dry cloth.
13. Be careful to store the product so that it does not fall over or cause damage. If the product tips over or is severely damaged, immediately turn it off, place the battery in an open area away from combustible materials and people, and dispose of it in accordance with local laws and regulations.
14. Please store this product out of the reach of children and pets. Please fix the expansion battery pack firmly to prevent vibration.
15. The product should be stored in a dry and ventilated place.

DISCARD

GARBAGE BINS

For disposal, please follow local laws and regulations on battery disposal.

- When conditions permit, please ensure to completely discharge the battery of this product before placing it in the designated battery recycling bin. This product contains batteries, which include hazardous chemicals. It is strictly forbidden to dispose of it in ordinary garbage bins. For details, please follow local laws and regulations on battery recycling and disposal.
- If the battery cannot be completely discharged due to a failure of the product itself, please do not dispose of it in the battery recycling bin. Instead, contact a professional battery recycling company for further disposal.
- The battery will not start after over-discharging. Please dispose of it as discarded.

PRODUCT DISPLAY

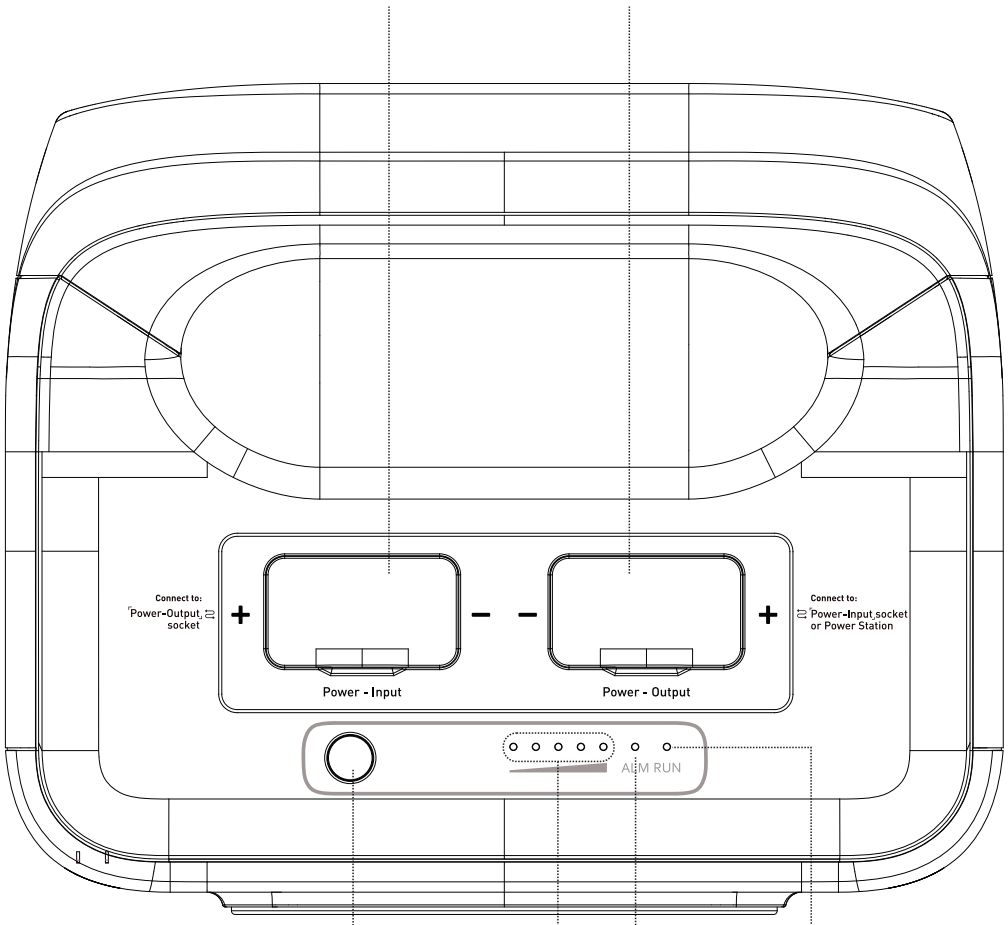
- This product cannot be used alone; it must be used together with our 3kW portable power supply.
- When combined with a 3kW portable power supply, the on/off function is controlled by the power button of the 3kW portable power station.

IMPORTANT NOTE

If this product is used alone, pressing the power switch button on this product will display the current battery capacity for 2 minutes. However, it cannot output power and will automatically shut down after 2 minutes.

Power Input
Connect to the power output interface of another power pack.

Power Output
Connect to the expansion Port of power station or the power input interface of another power pack.



Power button

Red light :
Alarm indicator

Blue light:
Run indicator

Blue light:
SOC indicator

Switching on/off: After short press the power button, the indicator light is on, showing the current operating status light and the power light. Press the power button for 3 seconds, the expansion battery pack turns off, and the indicator light goes out.

INDICATOR STATUS

INDICATOR	STATUS
Blue light: Run indicator	Standby, working
Red light： Alarm indicator	Alert, faulty
Blue light: SOC indicator	SOC indicator

NORMAL STATE

SOC INDICATOR	DESCRIPTION
	0%≤ SOC≤20%
	20%<SOC≤40%
	40%<SOC≤60%
	60%<SOC≤80%
	80%<SOC≤100%

ALERTING

Button Indicator	SOC indicator	Alerting	Solution
Red light blinks		Battery over voltage	Restart the battery. If it' s still not fixed, contact customer service.
		Battery cell voltage difference fault	
		Unit under voltage	Charge the battery, waiting for the voltage to recover.
		VTOP under voltage	
		VTOP over voltage	Restart the battery. If it' s still not fixed, contact customer service.
		Battery over temperature	Turn off and wait for hours. If it' s still not fixed, contact customer service.
		Battery low temperature	Turn off, wait the temperature to recover, restart the battery. If it' s still not fixed, contact customer service.
		Overcurrent when charging	Restart the battery. If it' s still not fixed, contact customer service.
		Overcurrent when discharging	
		Overcurrent when discharging	
		Short when discharging	Turn off, remove and check equipment, restart the battery. If it' s still not fixed, contact customer service.
		Short when charging	
		PCB over temperature	Turn off and wait for hours. If it' s still not fixed, contact customer service.
		Pre-charge resistor over temperature	
		MOS over temperature	Turn off and wait for hour, restart the battery. If it's still not fixed, contact customer service.
		IUIP parallel signal fault	Turn off, check the communication cable, restart the battery. If it' s still not fixed, contact customer service.
		I_WORK parallel signal fault	
		Parallelization over time	
		Parallelization readiness failure	

REMARK

- It is recommended to restart the device using the switch button.
- When parallelization is applied, if the battery enters under-voltage protection and powers off, you only need to press the switch button on any one of the batteries to forcibly activate it.

FAULTY

Button Indicator	SOC indicator	Alerting	Solution
Red light always on		Battery voltage sampling wire broken	Restart the battery. If it' s still not fixed, contact customer service.
		MOS failure	
		AFE communication failure	
		EEPROM failure	
		Voltage sensor failure	
		Current sensor drift failure	Contact customer service.
		Main circuit fault	
		Pre-charge over time	Restart the battery. If it' s still not fixed, contact customer service.
		Current sensor failure	
		Dead battery	
		Inverter communication failure	Turn off, check the communication cable. If it' s still not fixed, contact customer service.
		CAN bus failure	
		Parallel address recognition failure	
		Short circuit protection fuse circuit fault	Contact customer service.

GUIDELINE FOR USERS

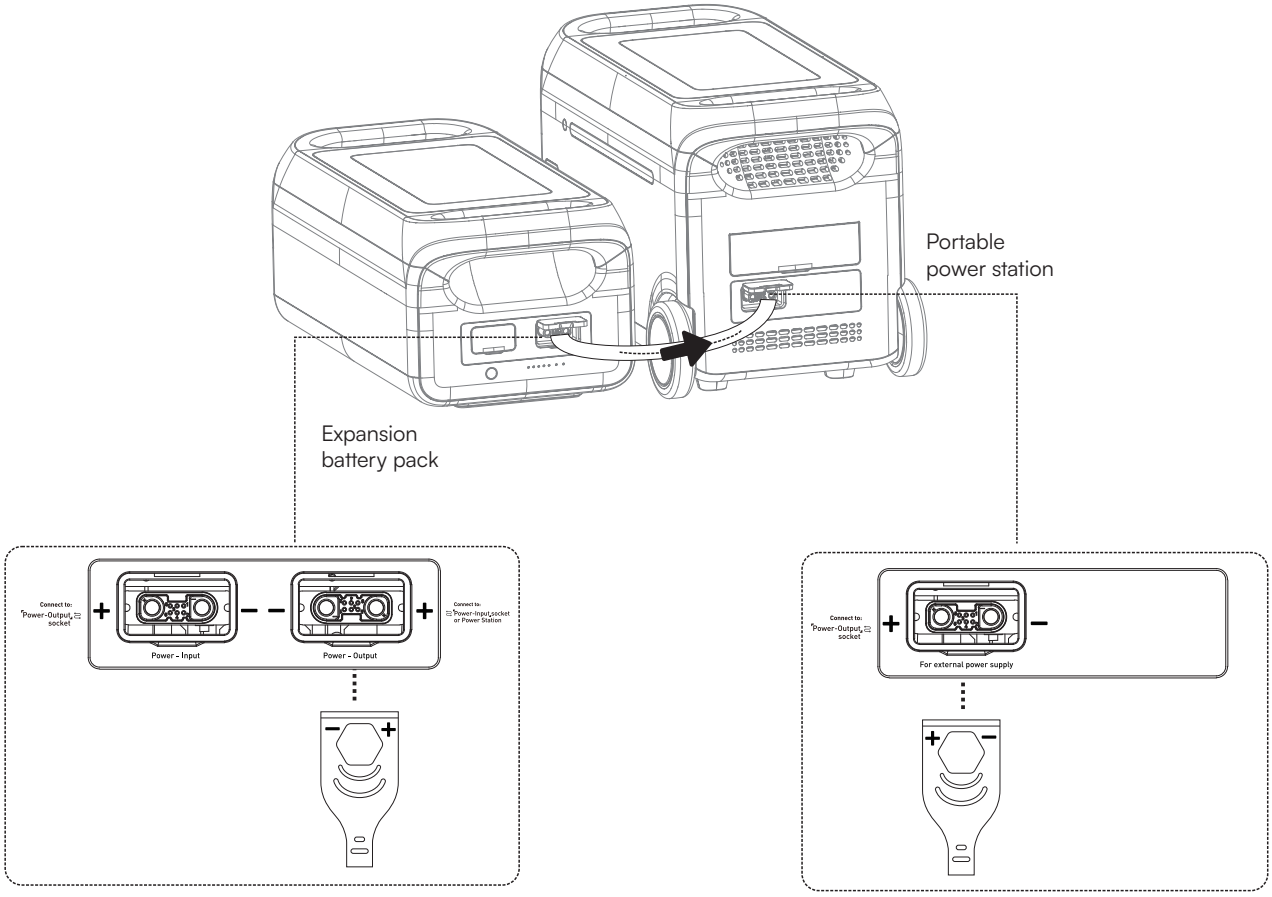
Up to six battery expansion packs can be connected simultaneously for greater capacity requirements.

NOTE THE FOLLOWING WHEN USING

- Before connecting the expansion battery pack, please ensure that both the power station and the expansion battery pack are in the off state.
- After connecting the expansion battery pack, make sure that the number of parallel expansion battery packs icon appears on the LCD of the power station before starting to use it.
- Do not connect or remove the expansion battery pack during charging or discharging. If you need to connect or remove an expansion battery pack during operation, please turn off the power first before proceeding.
- Do not touch the metal terminals at the connection port of the expansion battery pack with your hands or other objects. If the metal terminals come into contact with other objects, please gently wipe them clean with a dry cloth.

1 PORTABLE POWER STATION AND 1 EXPANSION BATTERY PACK IN PARALLEL MODE

- Turn off all portable power stations and expansion battery packs to be paralleled.
- Plug the parallel connection cable into the expansion port of the portable power station and the Power Output port of the expansion battery pack.
- After completing the parallel connection, press the switch button (⏻) on the portable power station to wake up the parallel power station and the expansion battery pack. This will display the current capacity. The power station will show the paralleled quantity, indicating that the parallel capacity expansion is successful.
- Once parallelization is complete, connect the corresponding outlet of the portable power station to charge or discharge

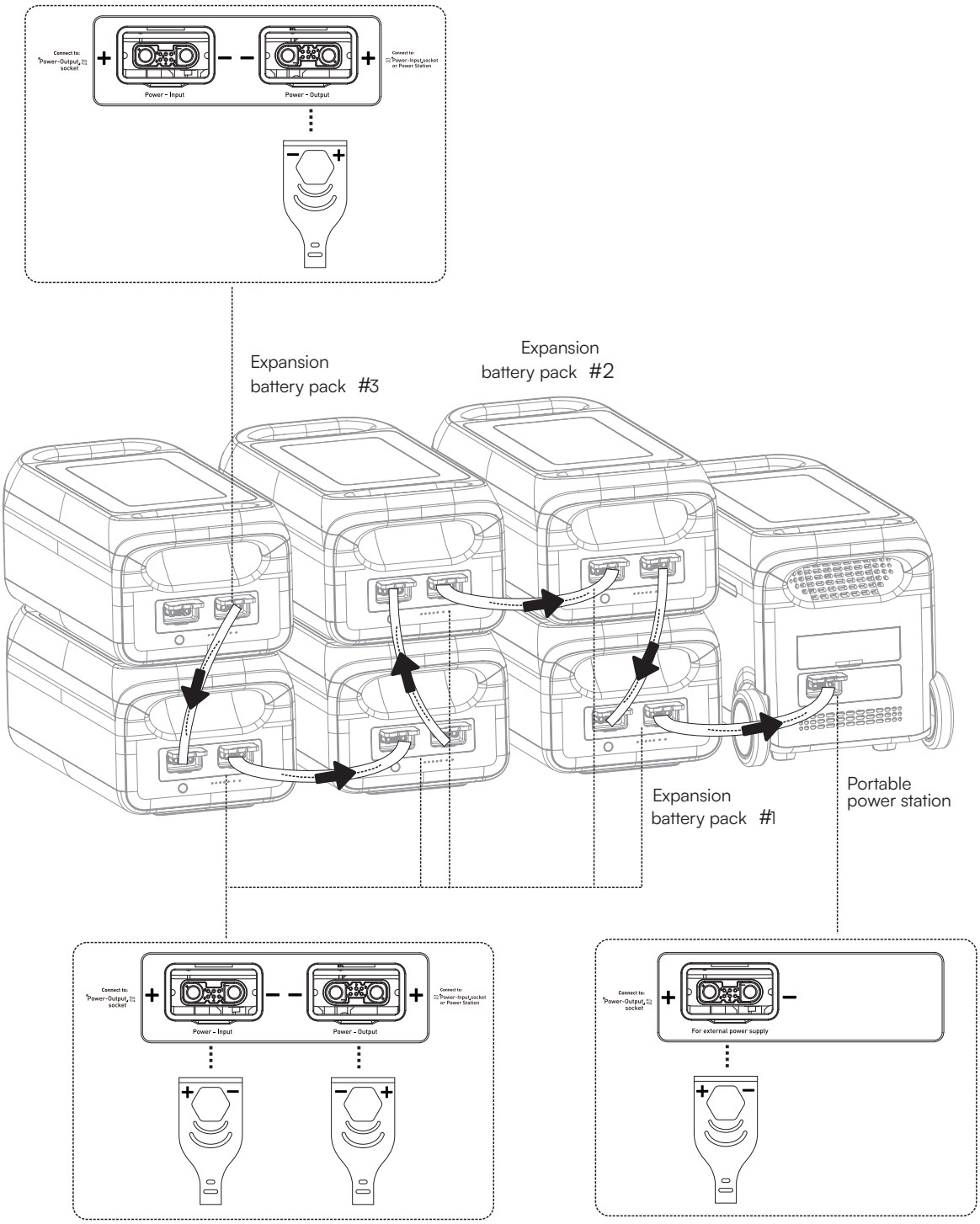


Remark: There are + and - symbols on battery packs and cables in case of reverse polarities.

1 PORTABLE POWER STATION WITH MULTIPLE EXPANSION BATTERY PACKS IN PARALLEL

1. Turn off the portable power station and all expansion battery packs to be paralleled.
2. The parallel connection cable is plugged into the expansion port of the portable power station and the Power Output of Expansion Battery Pack #1.
    - The Power Input of Expansion Battery Pack #1 is connected to the Power Output of Expansion Battery Pack #2.
    - The Power Input of Expansion Battery Pack #2 is connected to the Power Output of Expansion Battery Pack #3.
    - And so on, up to six expansion battery packs in parallel.

3. After the parallel connection is completed, press the switch button (⏻) of the portable power station to wake up the parallel portable power station and the expansion battery pack. This will display the current battery power level and the current number of parallel expansion battery packs, confirming that the parallel expansion is successful.
4. After the parallelization is completed, connect the corresponding outlet of the portable power station to charge or discharge



Remark: There are + and - symbols on battery packs and cables in case of reverse polarities.

FREQUENTLY ASKED QUESTIONS (FAQ)

- **What kind of battery is used?**

Lithium iron phosphate battery ($LiFePO_4$).

- **How to know the supply time?**

The LED screen of the portable outdoor power station displays the charge level of the expansion pack.

- **How to know it is charging?**

When charging, the power indicators will flash to show the charging state.

- **How to clean the product?**

Clean the unit with a dry, soft, and clean cloth or tissue.

- **How to store the unit?**

Turn it off and keep it in a dry and ventilated place. Do not expose it close to water.
For long-term storage, charge and discharge every 3 months (i.e., discharge to 0%, then charge to 100%, then discharge to 60% for long-term storage).

- **Can it be taken on board?**

No.

MAINTENANCE

- Keep the product away from water, heaters, and metal parts.
- It is recommended to use or store the expansion battery pack at an ambient temperature of 20°C—30°C.
- For long-term storage, charge and discharge every 3 months (i.e., discharge to 0%, then charge to 100%, then discharge to 60% for long-term storage). Products that have not been charged and discharged for more than 6 months are not covered under warranty.
- For safety, do not store the expansion battery pack at temperatures above 45°C or below -10°C.
- If the capacity is seriously insufficient and the idle time is too long, the product will enter deep sleep mode. It can only be used after being charged.

DISCLAIMER

Before using the power station expansion battery pack, please read this user manual carefully to ensure understanding and proper use. After reading the user manual, please keep it for future reference. Improper operation may cause serious injury to yourself or others, or result in product damage and property loss.
By using the expansion battery pack, you are deemed to have understood and accepted all terms and conditions herein. Users are responsible for their actions and all consequences arising therefrom. We shall not be liable for any loss arising from the user's failure to follow this user manual.
In compliance with all applicable laws and regulations, the company reserves the right of final interpretation of this document and all related product information. The company reserves the right to update, revise, or terminate this product without prior notice. For the latest product updates, please visit the official website.

IMPORTANT NOTES

- This product contains battery type "Secondary" (rechargeable).
- Electrical and electronic equipment that has become waste is known as old equipment/device. Old devices must not be disposed of with other household waste.
- Owners of old devices at the end of its service life must return the device by taking them to the collection points set up by public waste disposal authorities or distributors. This return does not entail any costs for you.
- Owners of old devices have an obligation to remove accessible batteries / rechargeable batteries as well as non-destructively removable lamps from the old device prior to return. This does not apply if old devices are being prepared for reuse with the participation of a public law firm.
- Battery removal warning: The battery contained in this product must be removed only by professional personnel only. The battery must never be removed by the end user, if not removed correctly it could damage the battery which could cause fire.
- Batteries removed from an old electronic device should be disposed of separately. This return of battery does not entail any costs for you and the user is obliged to return the battery.
- Please make sure that this product is not powered on when removing the battery. Fire hazard! Avoid short-circuiting the contacts of a detached battery. Do not incinerate the battery. Please handle the battery with Caution!
- If electrical appliances or batteries are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.



- The symbol of "Crossed rubbish bins "indicates that this product should not be disposed of with other household wastes and must be collected separately from unsorted municipal waste at the end of its service life.
- Please use the link below to view the online directory of the collection and return points:https://www.ear-system.de/ear-verzeichnis/sammel-und-ruecknahmestellen

RoHS CE UKCA 22 PAP

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