

A thick black line starts from the left edge, goes down vertically, then diagonally up to the right, and then continues horizontally to the right edge.

VOLTcraft

Ⓒ Operating Instructions

WS-PS501 Portable Power Station 500 W

Item no: 2619334

CE

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1 Introduction

Dear customer,

Thank you for purchasing this product.

If there are any technical questions, please contact:

www.conrad.com/contact

2 Intended use

The product is a portable rechargeable power station. Use the product:

- to power mains-powered appliances (230 V/AC)
- to power DC-powered devices

The product is equipped with the following protection mechanism:

- Output protection to protect against port overloading
- High/low temperature protection
- Protection against short circuiting

The product is intended for indoor use only. Do not use it outdoors.

Contact with moisture must be avoided under all circumstances.

If you use the product for purposes other than those described, the product may be damaged.

Improper use can result in short circuits, fires, electric shocks or other hazards.

The product complies with the statutory national and European requirements.

For safety and approval purposes, you must not rebuild and/or modify the product.

Read the operating instructions carefully and store them in a safe place. Make this product available to third parties only together with the operating instructions.

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USB4®, USB Type-C® and USB-C® are registered trademarks of USB Implementers Forum.

3 Delivery contents

- Power station
- Mains cable
- Power adaptor
- Car charger cable
- Operating instructions

4 Latest product information

Download the latest product information at www.conrad.com/downloads or scan the QR code shown. Follow the instructions on the website.

5 Description of symbols

The following symbols are on the product/appliance or are used in the text:



The symbol warns of hazards that can lead to personal injury.



The symbol warns of dangerous voltage that can lead to personal injury by electric shock.



This product must only be used in dry, enclosed indoor areas. It must not become damp or wet.



Read the operating instructions carefully.

6 Safety instructions



Read the operating instructions carefully and especially observe the safety information. If you do not follow the safety instructions and information on proper handling, we assume no liability for any resulting personal injury or damage to property. Such cases will invalidate the warranty/guarantee.

6.1 General

- The product is not a toy. Keep it out of the reach of children and pets.
- Do not leave packaging material lying around carelessly. This may become dangerous playing material for children.
- If you have questions which remain unanswered by this information product, contact our technical support service or other technical personnel.
- Maintenance, modifications and repairs must only be completed by a technician or an authorised repair centre.

6.2 Handling

- Handle the product carefully. Jolts, impacts or a fall even from a low height can damage the product.

6.3 Operating environment

- The product can only operate in limited temperature and humidity ranges. Always observe the temperature and humidity ranges in the technical data to prevent fire or explosion.
- Radio frequencies can make the product malfunction and cause fire, explosion, or accidents. Operate the product away from strong radio frequencies.
- The product can catch fire or explode if exposed to high temperatures. Keep the product away from heat sources such as open fires and stoves. Do not place inside a vehicle or other closed object that is exposed to the sun.
- Do not switch the product on after it has been taken from a cold to a warm environment. The condensation that forms might destroy the product. Allow the product to reach room temperature before you use it.
- Do not place the product under any mechanical stress.
- Protect the appliance from extreme temperatures, strong jolts, flammable gases, steam and solvents.

- Protect the product from high humidity and moisture.
- Protect the product from direct sunlight.

6.4 Charging

- You are strongly advised to attend the product while it is being charged. In case of malfunction, immediately disconnect the power supply to the product.
- The product battery heats up during product use and can explode or catch fire if charged immediately after use. Let the product cool down to room temperature before you charge it.

6.5 Operation

- Do not sit or stand on the product.
- Do not place objects onto the product.
- Do not connect defective cables.
- The product generates heat during use that is dissipated through the cooling system. If heat cannot be dissipated, the product could catch fire or the battery explode. NEVER cover the product or obstruct the components of the cooling system (example: fans, cooling fins, ventilation slots).
- Excessive heat (example: open fire, direct sunlight) can cause the product to catch fire. In case of fire, use a suitable fire extinguisher to extinguish the fire. Do not use the product again.
- Water can lead to electric shock. Keep the product away from water and liquids. Dry plugs before connecting. If the product falls into water, (1) disconnect the power supply cable at the power source (not at the product), (2) lift the product out of the water, and (3) let it completely dry. Do not use the product again.
- Dirt can lead to short circuiting. Keep plugs and sockets clean. Clean plugs before connecting.
- Consult an expert when in doubt about the operation, safety or connection of the product.
- If it is no longer possible to operate the product safely, take it out of operation and protect it from any accidental use. DO NOT attempt to repair the product yourself. Safe operation can no longer be guaranteed if the product:
 - is visibly damaged,
 - is no longer working properly,
 - has been stored for extended periods in poor ambient conditions or
 - has been subjected to any serious transport-related stresses.

6.6 Power adapter



Do not modify or repair mains supply components including mains plugs, mains cables, and power supplies. Do not use damaged components. Risk of death by electric shock!

- Connect the appliance to a wall socket that can be accessed easily.
- As power supply, only use the supplied mains adaptor.
- Only connect the power adaptor to a normal mains socket connected to the public supply. Before plugging in the power adaptor, check whether the voltage stated on the power adaptor complies with the voltage of your electricity supplier.
- Never connect or disconnect power adaptors if your hands are wet.
- Never unplug the power adaptor from the mains socket by pulling on the cable; always use the grips on the plug.
- For safety reasons, disconnect the power adaptor from the mains socket during storms.
- Do not touch the power adapter if there are any signs of damage, as this may cause a fatal electric shock! Take the following steps:

- Switch off the mains voltage to the socket containing the power adapter (switch off the corresponding circuit breaker or remove the safety fuse, and then switch off the corresponding RCD protective switch).
 - Unplug the power adapter from the mains socket.
 - Use a new power adapter of the same design. Do not use the damaged adapter again.
- Ensure that cables are not pinched, kinked or damaged by sharp edges.
 - Always lay cables so that nobody can trip over or become entangled in them. This poses a risk of injury.

6.7 LED light

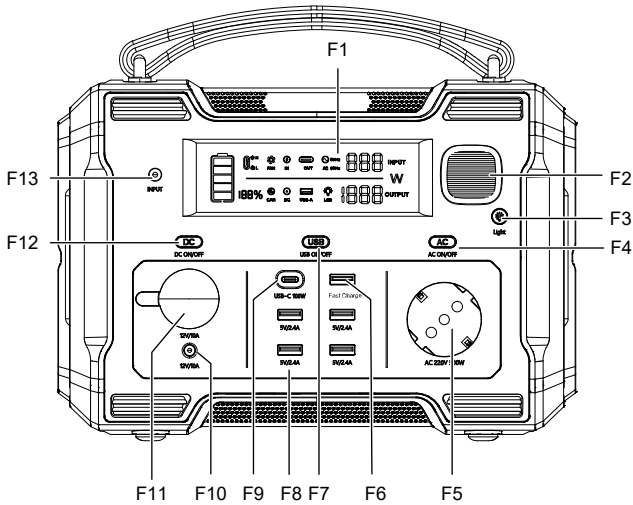
- Do not look directly into the LED light!
- Do not look into the beam directly or with optical instruments!

6.8 Connected devices

- Also observe the safety and operating instructions of any other devices which are connected to the product.

7 Product overview

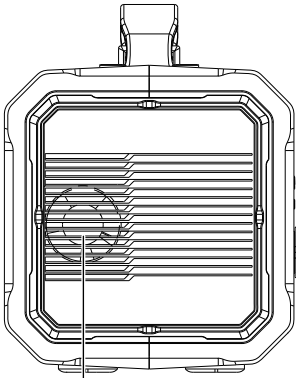
7.1 Front view



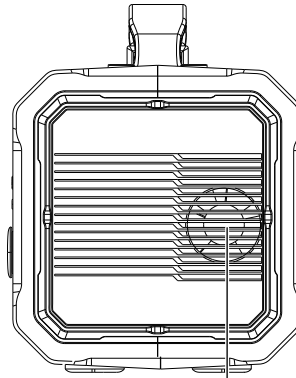
	Component	Function/Description
F1	Display	
F2	Light	<ul style="list-style-type: none"> Light with light modes: solid, SOS, flashing, off
F3	Light button Light	<ul style="list-style-type: none"> Press to switch light on. Press to change light modes.
F4	AC output activation button AC ON/OFF	<ul style="list-style-type: none"> Press to activate mains output ports. Press to deactivate mains output ports.
F5	AC output socket	<ul style="list-style-type: none"> Connect and power mains appliances.
F6	USB-A output port Fast Charge	<ul style="list-style-type: none"> Connect and power USB devices that support Fast Charging.
F7	USB output activation button USB ON/OFF	<ul style="list-style-type: none"> Press to activate USB output ports. Press to deactivate USB output ports.
F8	USB-A output port 5V/2.4A	<ul style="list-style-type: none"> Connect and power USB devices.
F9	USB-C® output port USB-C 100W	<ul style="list-style-type: none"> Connect and power USB devices that support Power Delivery (PD)
F10	Barrel DC output port 12V/10A	<ul style="list-style-type: none"> Connect and power DC devices via barrel jack.
F11	Cigarette lighter output port 12V/10A	<ul style="list-style-type: none"> Connect and power devices via cigarette lighter cable.
F12	DC output activation button DC ON/OFF	<ul style="list-style-type: none"> Press to activate DC output ports.

	Component	Function/Description
F13	DC input port INPUT	<ul style="list-style-type: none"> ■ Press to deactivate DC output ports. ■ Connect the supplied power adaptor or another suitable power source to charge the rechargeable battery.

7.2 Side views



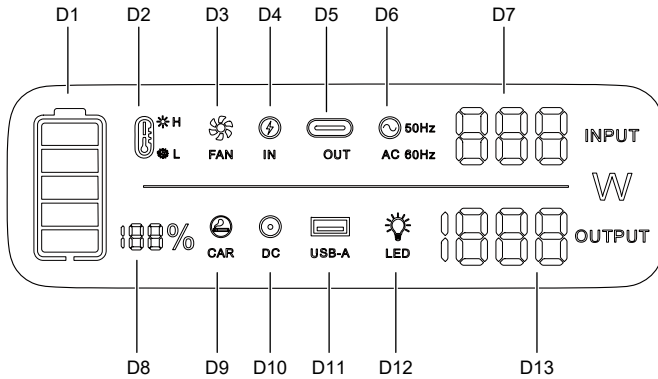
S1



S2

	Component	Function/Description
S1	Cooling fans	
S2		

7.3 Display



	Component	Description
D1	Battery indicator	<ul style="list-style-type: none"> Indicates the charging and discharging status of the rechargeable battery.
D2	High/low temperature indicator	<ul style="list-style-type: none"> Lights up if the temperature is too low or too high. Product will stop operating.
D3	Fan status indicator	<ul style="list-style-type: none"> Lights up if the cooling fans run.
D4	Charging indicator	<ul style="list-style-type: none"> Lights up if an external power supply is connected to charge the rechargeable battery.
D5	USB-C® indicator	<ul style="list-style-type: none"> Lights up if a device is connected to the USB-C® port.
D6	AC output indicator	<ul style="list-style-type: none"> Lights up if AC output is activated.
D7	Input power	
D8	Numerical battery charge indicator	<ul style="list-style-type: none"> Indicates battery status as a percentage value.
D9	Cigarette lighter output port indicator	<ul style="list-style-type: none"> Lights up if DC output is activated.
D10	Barrel DC output port indicator	<ul style="list-style-type: none"> Lights up if DC output is activated.
D11	USB output indicator	<ul style="list-style-type: none"> Lights up if USB output is activated.
D12	Light indicator	<ul style="list-style-type: none"> Lights up if the light is activated.
D13	Output power consumption	<ul style="list-style-type: none"> Indicates the total power consumption of all connected devices

8 Getting started

8.1 Switching on/off

1. Press any output port activation button to switch the product on.
→ The display will light up.
2. Press two output port activation buttons at the same time to switch the product off.

Note:

You cannot switch the product off while the product battery is being charged.

8.2 Using the light

1. Repeatedly press the light button to switch through different light modes: solid → SOS → flashing → off.

8.3 Charging the product battery

You can charge the product battery via the supplied power adaptor, via the supplied car charger cable, or an alternative power supply such as a solar panel.

The most efficient way to charge the product battery is via the power adaptor.

Note:

An alarm sounds if the remaining battery capacity falls below 10 %.

Preconditions:

Alternative power solutions (example: solar panel) must meet the product input specifications:

	Unit	Value
Input voltage	V/DC	12 - 30
PV input voltage	V/DC	12 - 30
Input current	A	5

Procedure:

1. (If power adaptor) Connect the power adaptor to the DC input port **INPUT**.
2. (If car charger cable) Connect the car charger cable to the DC input port **INPUT**.
3. (If other power supply) Connect the power supply to the DC input port **INPUT**.
→ The product will switch on and start the charging process.
→ The display will indicate the charging status.

9 Powering devices (Output)

9.1 Connecting devices

The product can power AC and DC powered devices. Connect your device to a port that meets the voltage and power requirements of the device.

1. Switch off the device.
2. Select a port on the product that meets the requirements of your device you want to power. Refer to the “Technical data” of the product for details.
3. Connect the device to the port on the product that you selected. Use a suitable cable. Keep plugs clean.

9.2 Powering devices

After you have connected your device to the product, you can power it. The product is divided into output units that allow you to switch on and off connected devices without having to disconnect and re-connect them.

If the product is overloaded, the overload protection will shut the power supply off and you will have to reset the overload protection before you can continue powering devices.

Limitations

- The combined output power of the Barrel DC output port **12V/10A** and the Cigarette lighter output port **12V/10A** is **120 W**.

Procedure

Preconditions:

- ✓ You have connected devices.

1. Press any output port activation button to switch the product on.
2. Press the output activation button that controls the output port to which your device is connected. For example, if your mobile phone is connected to a USB-C® output port, press the USB output activation button **USB ON/OFF**.
 - The connected device is supplied with power.
 - The display indicates the output power.
3. After use, press the output activation button to deactivate the output ports.



10 Configuring parameters

10.1 Configuring AC output voltage frequency (50/60 Hz)

Depending on the requirements of your appliance, you can set the frequency of the AC output voltage to 50 Hz or 60 Hz.

1. Press and hold the AC output activation button until “50Hz” or “60Hz” flashes on the display.
2. Repeatedly press the AC output activation button to select a frequency.
3. Wait until the select frequency value (“50Hz” or “60Hz”) stops flashing.
 - You have changed the AC output voltage frequency.

11 Troubleshooting

Problem	Possible cause	Suggested solution
Temperature symbol  is flashing. Alarm is sounding.	Overtemperature protection was triggered.	<ol style="list-style-type: none">1. Disable all output ports by pressing the output activation buttons.2. Let the product cool down.3. Check if there are objects that cover the cooling fan inlet and outlet. Remove them. <p>→ The overtemperature protection is reset and the product ready to power devices.</p>
Output port indicator symbol (example: ) is flashing. Alarm is sounding.	Output overload protection was triggered.	<ol style="list-style-type: none">1. Disconnect the device that triggered the overload protection.2. Press the output activation button that controls the output port to which your device was connected to switch the port(s) off. For example, if a heater was connected to the AC output port, press the AC output activation button. <p>→ The output overload protection is reset and the product ready to power devices.</p>

12 Cleaning

Important:

- Do not use aggressive cleaning agents, rubbing alcohol or other chemical solutions. They damage the housing and can cause the product to malfunction.
- Do not immerse the product in water.

1. Switch the product off.
2. Disconnect the product from the power supply.
3. Disconnect all connected cables.
4. Let the product cool down to ambient temperature.
5. Clean the product with a dry, fibre-free cloth.

13 Storage

1. Switch the product off.
2. Disconnect the product from the power supply.
3. Disconnect all connected cables.
4. Let the product cool down to ambient temperature.
5. Full charge the product battery.
6. Store the product in a place that satisfies the storage conditions provided in the "Technical data" and that is away from direct sunlight. Make sure children cannot access the place so that they do not play with the product.

14 Disposal



This symbol must appear on any electrical and electronic equipment placed on the EU market. This symbol indicates that this device should not be disposed of as unsorted municipal waste at the end of its service life.

Owners of WEEE (Waste from Electrical and Electronic Equipment) shall dispose of it separately from unsorted municipal waste. Spent batteries and accumulators, which are not enclosed by the WEEE, as well as lamps that can be removed from the WEEE in a non-destructive manner, must be removed by end users from the WEEE in a non-destructive manner before it is handed over to a collection point.

Distributors of electrical and electronic equipment are legally obliged to provide free take-back of waste. Conrad provides the following return options **free of charge** (more details on our website):

- in our Conrad offices
- at the Conrad collection points
- at the collection points of public waste management authorities or the collection points set up by manufacturers or distributors within the meaning of the ElektroG

End users are responsible for deleting personal data from the WEEE to be disposed of.

It should be noted that different obligations about the return or recycling of WEEE may apply in countries outside of Germany.

15 Technical data

15.1 Rechargeable battery

	Unit	Value
Battery type		LiNiCoMnO2
Rated battery voltage	V	21.6
Battery capacity	Ah	22.4
Charging methods		Mains supply, solar, car
Approx. charging duration - power adaptor	h	5

15.2 Output power

	Unit	Value
Rated power (total)	W	500
Peak power (total)	W	1000

15.3 Protection

	Unit	Value
Short-circuit protection		Yes
Overcharge protection		Yes
Overheating protection		Yes
Over-voltage protection		Yes

15.4 Input

DC input port (barell jack)

	Unit	Value
Number of ports		1
Input voltage	V/DC	12 - 30
PV input voltage	V/DC	12 - 30
Input current	A	5
MPPT support		Yes

15.5 DC Output

Barrell DC output port

	Unit	Value
Number of ports		1
Output voltage	V/DC	12 - 14
Output current	A	10

Cigarette lighter output port

	Unit	Value
Number of ports		1
Output voltage	V/DC	12 - 14
Output current	A	10

USB-A output port (5 V / 2.4 A)

	Unit	Value
Number of ports		4
Output voltage	V/DC	5
Output current	A	2.4
Max. output power	W	12

USB-A output port (Fast Charge)

	Unit	Value
Number of ports		1
Output voltage/current	V/DC, A	5 V/DC, 3 A; 9 V/DC, 2A; 12 V/DC, 1.5 A
Max. output power	W	18

USB-C® output port (100 W)

	Unit	Value
Number of ports		1
Output voltage/current	V/DC, A	5/9/12/15 V/DC, 3 A; 20 V/DC, 5 A
Max. output power	W	100

15.6 AC output

	Unit	Value
Number of ports		1
Output voltage	V/AC	220 - 240
Output voltage frequency	Hz	50
Rated power (all sockets)	W	500
Peak power (all sockets)	W	1000
Output wave form		Pure sine wave
Efficiency	%	85

15.7 Light

	Unit	Value
LED light	W	1
Colour temperature	K	4000

15.8 Operating and storage environment

	Unit	Value
Operating temperature - Charging	°C	0 to +45
Operating temperature - Discharging	°C	-18 to +45
Operating humidity (non-condensing)	% RH	10 - 90
Storage temperature	°C	0 to +25
Storage humidity (non-condensing)	% RH	10 - 90

15.9 Others

	Unit	Value
Dimensions (L x W x H)	mm	269 x 178 x 207
Weight	kg	5

15.10 Power adaptor

	Unit	Value
Input voltage	V/AC	100 - 240
Input voltage frequency	Hz	50/60
Input current	A	2
Output voltage	V/DC	24
Output current	A	5

15.11 Car charger cable

	Unit	Value
Input voltage	V/DC	12 - 30



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