

ALPHA DIGITAL

PORTABLE POWER STATION

User manual



MODEL: MT-CN320

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IMPORTANT SAFETY INSTRUCTIONS






Please be sure to observe the following for safe use

	It indicates that attention should be paid to fire, rupture and high temperature when operating the product. Specific attention is described in the figure.
	This means that this behavior is prohibited when operating a product. Specific prohibited content is described in the icons or text in or near the icons.
	Represents the mandatory operation of the product in accordance with the instructions. Specific mandatory content is described in graphics or text in or near the figure number.






DANGER

	Please do not disassemble, repair or transform, which may cause electric shock, heat, fire and other dangers.
	Do not put the product near the fire source or put it into the fire or heat, which will cause fire or burns and other dangers.
	This product can not be charged and used in dew, bathhouse, rain and other places; do not use water to clean the product, it will cause electric shock, heat, fire and other dangers.
	Do not use metal to contact AC output interface, it may cause electric shock, fever, fire and other dangers.
	Please do not use it as general waste disposal. Electricity shock, heat and fire may occur in the garbage collection truck.

WARNING

	Please keep the place clean for use and storage. Power or small metal contact terminal may cause short circuit, accidents such as smoke or fire.
	Be sure to check before use. In case of any abnormality such as breakage, crack, leakage, fever and AC line breakage, please stop using the product immediately.
	Do not let children use this product. Or it may cause accidents or injuries.
	Remove the AC cable from the socket when lightning strikes during charging. When it thunders, a large current from the socket may be generated into a fever, fire and other accidents.
	Please charge in the specified voltage range (AC 100~240V). Otherwise, it may cause heating, fire and other accidents.

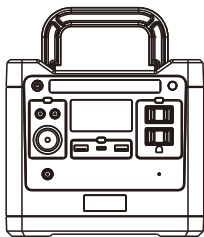
NOTE

	Please stop using the product immediately when there is any abnormality such as rusting, peculiar smell, fever, etc.
	Do not allow this product and the AC cable to get wet with water or other liquids. It may cause short circuit, heat, fire, etc.
	Please charge, use this product under 113°F, storage this product under 149°F otherwise may cause poor performance or heat up.
	Please carefully read the operating instructions of the electrical products to be connected.
	Be sure to turn off the main power button during storage to prevent unnecessary discharge of the battery and prevent electric shock.

ABOUT THE PRODUCT

WHAT'S IN THE BOX

- 1 x 298Wh Portable Power Station
- 1 x AC Adaptor (Including AC Charging Cable)
- 1 x Cigarette Lighter Cable
- 1 x DC to MC 4 Cable
- 1 x User Manual
- 1 x Quick Start Guide
- 1 x Warranty Card



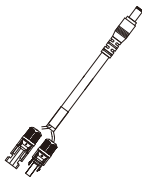
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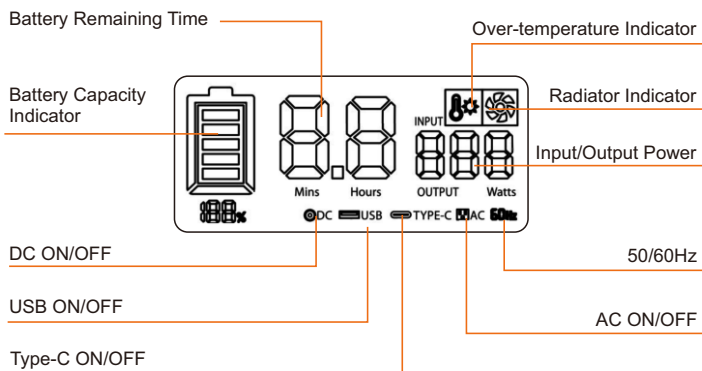
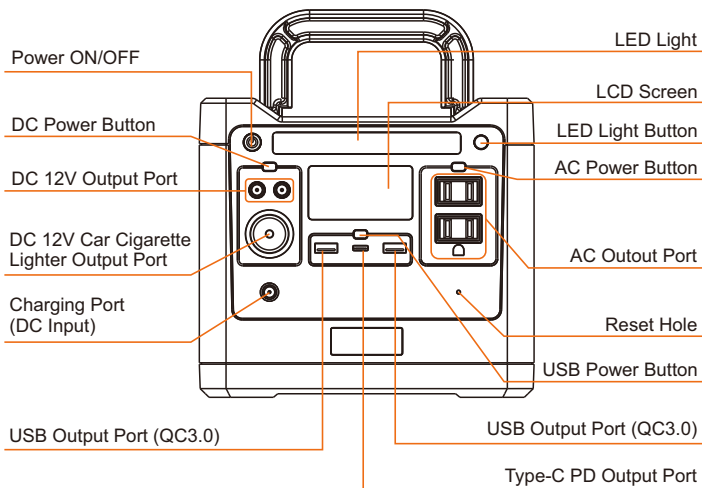


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Note: Picture is for reference only, take the actual packed product as standard.

ABOUT THE PRODUCT

PRODUCT INTRODUCTION



ABOUT THE PRODUCT

SPECIFICATIONS

OUTPUT		
AC Output	Rated Voltage	AC110V \pm 10%
	Rated Power	320W
	Peak Power	640W
	Output Waveform	Sine Wave
	Overload Capability	320W \leq load $<$ 420W
	Frequency	50/60Hz (Adjustable)
DC 12V Output (Cigarette Lighter)	Rated Voltage	12V
	Rated Current	10A
DC 12V Output	Rated Voltage	12V
	Rated Current	4A
USB Output	Quick Charge Technology	Compatible with most mobile phones
	Rated Voltage	5V, 9V, 12V
	Rated Current	Max 18W
Type-C Output	Charging Agreement	PD (60W)
	Rated Output	5V, 9V, 12V, 15V, 20V
LED Light	4W Ultra bright LED light with SOS mode	
INPUT		
Input	12~24 VDC	
Input Power	65W MAX	
BATTERY		
Rated Capability	298Wh(93120mAh)	
Rated Voltage	12.8V	
Battery Cell Type	Lithium iron phosphate (LiFePO4)	
Voltage Range	11.2V~14.6V	
BMS Safety System	Yes	
GENERAL		
Storage Environment	14°F~149°F	
Working Temperature	32°F~113°F	
Product Size	188*165*200mm or 188*165*170mm	
Product Net Weight	4.1kg	

ABOUT THE PRODUCT

LCD BATTERY DISPLAY

The LCD Battery Display indicates the charge level and the remaining capacity. When Charging it, you will notice a battery segment blinking with 1 second interval. This indicates the current charge status and the number under INPUT shows the real-time charging power. Once it is fully charged, all battery segments will be lit and remain solid.

OVERTEMPERATURE INDICATOR DISPLAY

When the discharge temperature is greater than 149°F, the over-temperature protection indicator will be displayed on the screen for 5 seconds.

RADIATOR INDICATOR DISPLAY

The fan will turn on when the power supply internal temperature reaches 113°F.

USING THE PRODUCT

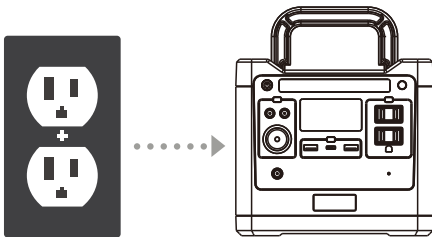
Important Tips Before Use

Note: Please charge the product to 100% before using. When charging the product, the battery capacity display icon on LCD screen will be on dynamic status, after the battery is fully charged, the display icon will stay solid.

CHARGING

1. Use AC Charge to Charge the Product

Note: Always use the standard AC charger that comes with the product.



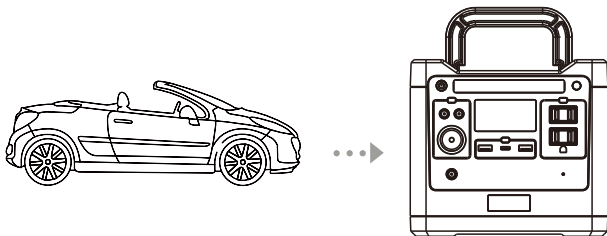
USING THE PRODUCT

- (1). Connect the product and power outlet with the AC adaptor included in the package.
- (2). Please unplug the charge when charging completed. (It takes about 5~6 hours to fully charge the product with the included power adaptor)
- (3). Please use the included adaptor, non-standard adapters may cause defects to the product.

Note:

1. *It is normal for this product to get hot during charging.*
2. *Make sure that the wiring is in good contact, otherwise the contact terminals may melt at high temperatures.*

2. Use Car Cigarette Lighter to Charge the Product



- (1). Connect the product and the car cigarette lighter socket with the cigarette lightercable included in package.
- (2). Charge the product after starting the car.

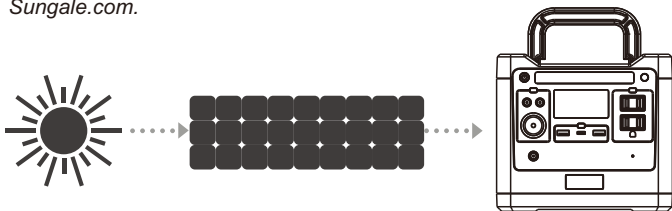
Note:

1. *Make sure that the wiring is in good contact, otherwise the contact terminals may melt at high temperatures.*
2. *The car needs to be started before it can charge the product, otherwise it may run out of battery power.*

USING THE PRODUCT

3. Use Solar Panel (not included) to Charge the Product

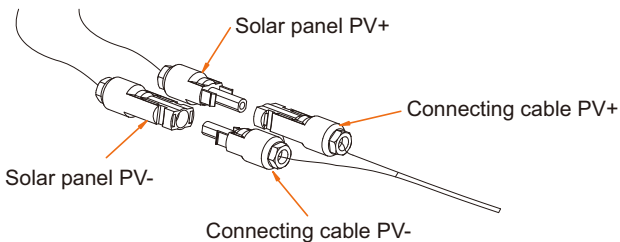
Please note: Solar panels need to be purchased separately from Sungale.com.



- (1). Choose a suitable solar panel (Voltage 12~24V / Max.(100W))
- (2). Put the solar panel under direct sunshine, face the sun straightly.
- (3). Take a MC4 cable or DC5525 cable (not included), connect the solar panel and the product.
- (4). When the product is fully charged, it will stop charging automatically. Please remove the charging cable, and turn off the product.

Note:

1. Please make sure the cable connection is secure and stable, otherwise it may cause the connector in high temperature or create sparking.
2. Please charge the product under 32-113°F temperature environment.
3. During charging, it is normal the product gets hot.
4. Charging time is different when sunlight intensity is different.
5. If you choose a solar panel with MC4 connector, please make sure the positive and negative poles of the solar panel connected correctly. Refer to the following illustration.



USING THE PRODUCT

BATTERY LIFE

The product is designed to retain up to 80% of its original capacity at 2000 complete charge cycles when operating under normal conditions.

BUTTONS OPERATION


1. Power ON/OFF the Product

Power on: Press and hold the power button and the LCD screen lights up.


Power off: Press and hold the power button, the LCD screen will be off.

2. DC Power Button

DC power on: Press the DC button, the LCD will display ( DC).



DC power off: Press the DC button, and the LCD will disappear ( DC).



3. AC Power Button

AC power on: Press the AC button, the LCD will display ( AC 60Hz).

AC power off: Press the AC button, the LCD will disappear ( AC 60Hz).

4. USB Button

USB power on: Press the USB button, the LCD will display ( USB  TYPE-C).

USB power off: Press the USB button, the LCD will disappear ( USB  TYPE-C).

5. LED Button

LED power on: Press the LED button in turn, the order of LED light will be: Micro bright-half bright-fullbright.

LED power off: Press and hold the LED button, the LED lights will be turned off.

SOS LED power on: Double press the LED button and the SOS light will be turned on.

SOS LED power off: Press the LED button and the SOS light will be turned off.

USING THE PRODUCT

6. Adjust LCD Screen Brightness

Double click the power button to switch the LCD screen between the LCD screen between always bright or dim power saving mode.

7. Adjust AC Output Frequency

Press and release the power and AC button together, to switch between 50 Hz and 60Hz.

Note:

1. Turn off the product to conserve power when not in use.
2. When no key is pressed after power on, the product will turn off automatically.

OUTPUT PORTS (CHARGE DEVICES)

1. USB Output Port

Three USB output ports let you charge up to multi devices simultaneously. Each USB port maximum output is 18W (Support the Quick Charge technology).

2. Type-C PD Output Port

Can used to charge smart phones, tablets, etc. Maximum output is 60W. Support multi-protocol mode, and is compatible with any device that supports Type-C PD charging.

3. DC 12V Output Port

Can used to charge small fan, LED light, etc. Each DC output ports maximum output is 12V/4A.

4. DC 12V Cigarette Lighter Output Port

For Vehicle Refrigerator, vehicle air pump, vehicle vacuum cleaner and other 12V equipment. Maximum power output is 12V/10A (120W).

Note: DC output can be used for most small appliances products. Some products with instantaneous high current may trigger over-current protection.

USING THE PRODUCT

5. AC Output Port

To be used for laptops, cameras, TV, monitor, power tools, breathing machine, electric blanket and other AC power equipment. Each AC port maximum power output is 320W

Note: AC output works with electrical products with power below 320W or peak power below 640W .

Other Considerations:

1. Make sure electrical device is compatible before connecting to this product.
2. Electrical output will stop automatically if any safety protection is triggered.
3. If electrical output stops repeatedly, stop using the product immediately. Do not use until problem is solved.

CUSTOMER MANAGEMENT

STATEMENT

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PRODUCT STORAGE AND MAINTENANCE

1. Fully charge the machine before storage.
2. Switch off the power when not is use, to prevent power consumption.
3. If there is any dirt or soak, wite clean with a clean cloth.
4. Do not use gasoline, volatile oil, thinner, kerosene on the product. which may cause damage.
5. Keep it in dry and less dusty place. Keep under temperature between within 14⁰F~149⁰F , avoid direct sunlight.
6. Please full charge the product at least once every three months.
7. Do not store it for long in a car trunk, loading platform, or other hot surface under direct sunlight. It may cause the product failure, degradation or thermal problem.

CUSTOMER MANAGEMENT

TROUBLESHOOTING

If the product cannot charge or power a device, please check according to following steps:

1. Make sure the 'POWER' button is turned on.
2. Make sure the AC, DC or USB button is on.
3. Check the battery capacity, if it's lower than 10%, please recharge the product as soon as possible.
4. Make sure the load power connected doesn't exceed the max power of this product, each port has a limit of maximum output too.

If you can't clear the trouble after above steps, please contact our service center.

WARRANTY (1-YEAR-LIMITED)

The manufacture's warranty is void under the following circumstances but not limited to:

- Improper or inadequate maintenance or modification.
- Accident, misuse, abuse, contamination, or other external causes.
- The use of unspecified adapter and accessories.
- Damages that occurs as a result of one's failure to follow the instructions.

FCC AND SAFETY INFORMATION

WARNING!!! This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

SUPPORT

For any support or comments concerning this products, please send an email to: service@sungale.com or toll free number in the USA: 800-473-5156