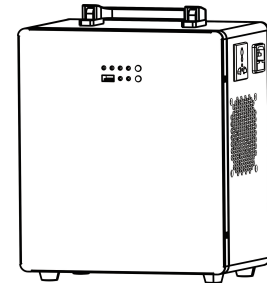


User Manual



**MS Series Photovoltaic
energy storage portable power supply**



	USB Output	5V/1A
PV Input	Input Voltage Range	11-55VDC
	Maximum Output Power	550W(Max)
	Maximum Input Current	15A(Max)
	Maximum Output Current	100A(Max)
Battery Characteristics	Battery type/Rated Voltage	Lithium iron battery /6.4V-314AH
	Battery capacity	2009WH
	Battery Voltage Range	6.0-7.3VDC
	Maximum Output Power	1000W
	AC+PV Charging Current Range	1-160A(can be set)
Other Characteristics	Communication & Monitoring	USB(Serial interface)
	Operating ambient temperature	-10-40°C
	Storage ambient temperature	-15-60°C
	Operating/Storage ambient	5-95% (No condensation)
	Noise	≤50dB
	Working altitude	Applicable to ≤3000 m Decrease by 10% for every 1000m (above 3000m)
Machine Size(L*W*H)mm		285*230*315
Package Size(L*W*H)mm		355*305*350
Net weight(kg)		18.4

■ Product Features

- Photovoltaic energy storage, green environmental protection.
- Portable design, easy to use.
- Sine wave output, strong load adaptability.
- Intelligent charge/discharge management, safe and worry-free.
- Overcurrent / Overvoltage / Short Circuit / Over Temperature Protection.

■ Application scenarios

Family backup, mobile office, outdoor camping, agricultural irrigation, emergency relief, etc.

■ Operating Instructions

1. When connecting photovoltaic modules with sunlight or connecting to the utility, battery power indicator lights flash in sequence and automatically turn on to charge the battery.
2. Turning the device on and off please refer to "Instructions for the Button function".

■ Connection、Storage instruction

1.Unpacking Inspection

1.1 Open the package, inspect product accessories, including:1 host,1 piece user manual .

1.2 Inspect whether the machine have been damaged during the transport or not, If it have some damage, don't start the machine, contact the logistics company and dealer.

2.Connection、Storage Notes

2.1 Before making the final AC/DC connection, be sure positive (+) must be connected to positive (+) and negative (-) must be connected to negative (-) , so as to avoid equipment damage.

2.2 If it needs to transport machine, please take proper protection measures;

move the machine from low temperature environment to high temperature

environment. may appear droplet, please keep it dry and ensure safety.

2.3 Don't let the machine exposure in damp, inflammable and explosive or large accumulation of dust environment. Don't cover and block vents, please preset above 10cm air circulation clearance so that having a good cooling.

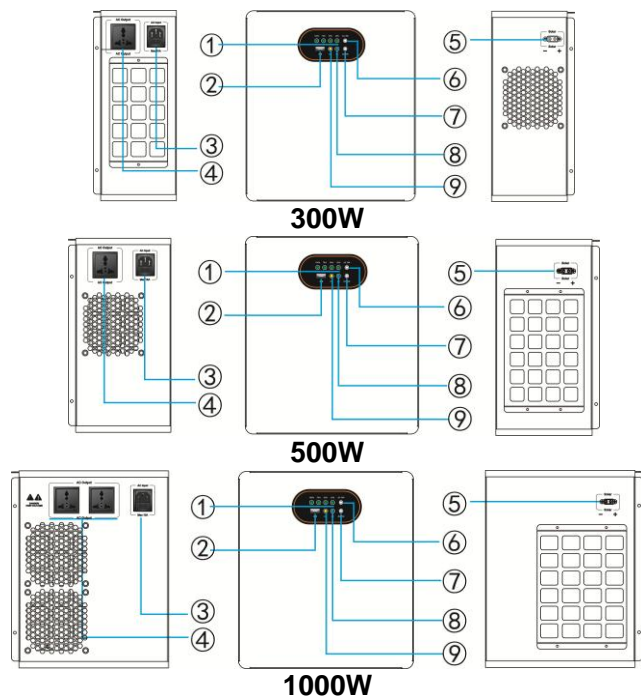
	Operating/Storage ambient	5-95% (No condensation)
	Noise	≤50dB
	Working altitude	Applicable to ≤ 3000 m Decrease by 10% for every 1000m (above 3000m)
Machine Size(L*W*H)mm		255*155*315
Package Size(L*W*H)mm		315*220*345
Net weight(kg)		10.5

■ Technology Parameter (1000W)

Type:		MS-10264-HV	MS-10264-LV
AC Input	Rated Input Voltage	230VAC	120VAC
	Input Voltage Range	90-280VAC	60-145VAC
	Input Frequency Range	45-65Hz	
	Input Power Factor	>0.95	
AC Output	Maximum Output Power	1000W	
	Rated Output Voltage	208V/220V 230V/240V	100V/110V/ 120V
	Rated Input Frequency	50Hz±0.5%	60Hz±0.5%
	Output Power Factor	≥99%	
	Overload Capability	CP1000W, <170VAC power off	CP1000W, <85VAC power off
	Voltage Waveform	Pure Sine Wave	
	Harmonic distortion (THD)	<3%@ Linear load,<5% Non-linear load	
	UPS Switching Time	≤20ms	

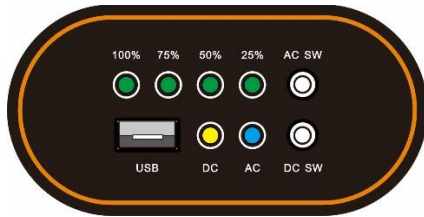
	Rated Input Frequency	50Hz±0.5%	60Hz±0.5%
	Output Power Factor	≥99%	
	Overload Capability	CP500W, <170VAC power off	CP500W, <85VAC power off
	Voltage Waveform	Pure Sine Wave	
	Harmonic distortion (THD)	<3%@ Linear load,<5% Non-linear load	
	UPS Switching Time	≤20ms	
	USB Output	5V/1A	
	PV Input	Input Voltage Range	11-55VDC
Maximum Output Power		300W(Max)	
Maximum Input Current		10A(Max)	
Maximum Output Current		80A(Max)	
Battery Characterist ics	Battery type/Rated Voltage	Lithium iron battery /3.2V-314AH	
	Battery capacity	1004WH	
	Battery Voltage Range	3.0-3.65VDC	
	Maximum Output Power	500W	400W
	AC+PV Charging Current Range	1-140A(can be set)	
Other Characterist ics	Communication & Monitoring	USB(Serial interface)	
	Operating ambient temperature	-10-40℃	
	Storage ambient temperature	-15-60℃	

■ System panel diagram and state



①	Battery Level	②	5VDC-USB output
③	AC Input	④	AC Output
⑤	PV Input	⑥	AC Output Switch
⑦	DC Output Switch	⑧	AC Output Indicator light
⑨	DC Output Indicator light		

System Appearance Of Product and Direction:



Instructions for the Button function		
Button	Operating	Function
AC	Short press	Show remaining battery power
	Long press (3s)	Turn on the AC/DC output
		Close the AC output and synchronously close the DC output opened by the AC switch.
DC	Short press	Show remaining battery power
	Long press (3s)	Turn on DC output
		Close DC, when AC output, cannot close DC output separately

	Maximum Output Power	300W
	AC+PV Charging Current Range	1-100A(can be set)
Other Characteristics	Communication & Monitoring	USB(Serial interface)
	Operating ambient temperature	-10-40°C
	Storage ambient temperature	-15-60°C
	Operating/Storage ambient	5-95% (No condensation)
	Noise	≤50dB
	Working altitude	Applicable to ≤3000 m Decrease by 10% for every 1000m (above 3000m)
Machine Size(L*W*H)mm		255*135*315
Package Size(L*W*H)mm		325*200*350
Net weight(kg)		7.9

Technology Parameter (500W)

Type:		MS-50132-HV	MS-50132-LV
AC Input	Rated Input Voltage	230VAC	120VAC
	Input Voltage Range	90-280VAC	60-145VAC
	Input Frequency Range	45-65Hz	
	Input Power Factor	>0.95	
AC Output	Maximum Output Power	500W	
	Rated Output Voltage	208V/220V 230V/240V	100V/110V/ 120V

■ Technology Parameter (300W)

Type:		MS-30132-HV
AC Input	Rated Input Voltage	230VAC
	Input Voltage Range	90-280VAC
	Input Frequency Range	45-65Hz
	Input Power Factor	>0.95
AC Output	Maximum Output Power	300W
	Rated Output Voltage	208V/220V/230V/240V
	Rated Input Frequency	50Hz±0.5%
	Output Power Factor	≥99%
	Overload Capability	CP300W, <170VAC power off
	Voltage Waveform	Pure Sine Wave
	Harmonic distortion (THD)	<3% @ Linear load, <5% Non-linear load
	UPS Switching Time	≤20ms
	USB Output	5V/1A
	PV Input	Input Voltage Range
Maximum Output Power		300W(Max)
Maximum Input Current		10A(Max)
Maximum Output Current		80A(Max)
Battery Characteristics	Battery type/ Rated Voltage	Lithium iron battery /3.2V-206AH
	Battery capacity	659WH
	Battery Voltage Range	3.0-3.65VDC

Instructions for the working indicator light					
Work Indicator light	State	Introductions			
AC light	On	AC/DC Output			
	OFF	AC no Output			
	Flash	Inverter fault			
DC light	On	DC Output			
	Off	DC no Output			
Instructions for the battery power indicator light					
Power Indicator light	Introductions	25%	50%	70%	100%
Charge state	battery power <25%	Flashing in sequence			
	25%< battery power <50%	ON	Flashing in sequence		
	50%< battery power <75%	ON	ON	Flashing in sequence	
	75%< battery power <100%	ON	ON	ON	FLASH
	100%=battery power	ON	ON	ON	ON

Discharge state	battery power <10%	Flash	OFF	OFF	OFF
	10%< battery power <25%	ON	OFF	OFF	OFF
	25%< battery power <50%	ON	ON	OFF	OFF
	50%< battery power <75%	ON	ON	ON	OFF
	battery power > 75%	ON	ON	ON	ON
Note: When turning off the device, wait for more than 5 seconds, and the power indicator will go out in turn.					

■ Common fault and solution

When it appears the following phenomenon, pls check as the following solution.

phenomenon	Abnormal/fault reason	Solution
Stop Charging/AC light flashes/ Battery Power Indicator lights off	PV Input abnormal	Please check whether both ends of the photovoltaic modules wiring is normal
Stop Charging/AC light flashes	AC Input Undervoltage	Pls check whether the AC Input wiring connected accurately and reliably;
	AC Input Overvoltage	
Stop Discharging /AC light flashes	AC Output Overvoltage	Pls check whether the appliance connected reliably and whether it is overloaded or short circuited;
	AC Output Undervoltage	
	AC Output Overload	
	AC Output Short Circuit	
DC light is on and DC no output	DC Output abnormal	Pls check whether the appliance connected reliably
Stop Discharging/AC light and“25%” Indicator light synchronously flash	Battery Undervoltage	The battery is over-discharge, Wait for the battery to charge after turning off the appliance.
Stop Charging	Battery Overvoltage	Please contact the after-sales personnel
Stop Charging or Discharging/AC light flashes	Over Temperature Protection	The battery temperature is abnormal, check the battery temperature and temperature probe.