



BCW-L1225

**Waterproof LifePO4 Battery
Charger 12V/25A**



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Product Description:

The charger adopts MCU four-stage intelligent charging technology, which can accurately track and detect the charging process of the lead-acid battery, so that it is always in the best charging state and greatly prolongs the service life of the lead-acid battery.

The charger has a wide input voltage range, multiple protection functions and high reliability. The control circuit adopts advanced LLC half-bridge resonant switching power supply control technology, reasonable structure, and heat dissipation design, so that the whole machine has high efficiency, small size, and light weight, which greatly improves the portability and safety of the charger.

Main Product Specifications:

Maximum output	Input voltage	Output Voltage	The output current
500W	180-245Vac	14.6 V	25A

Work Conditions:

Project	The technical requirements	unit	Remark
Operating temperature	-10~+45	°C	
Storage temperature	-40~+75	°C	
Relative humidity	5%~95%	/	No condensation
Atmospheric pressure	70~106	Pa	
The altitude	≤2000	m	
The cooling way	External built-in ball fan for heat dissipation	/	

Electrical Characteristics:

The input features			
project	The technical requirements	unit	Remark
Rated input voltage	180-265	Vac	If the input Voltage is lower than the range value or higher than the range value, the charger will automatically protect and will behave normally after the value is restored
Input voltage range	180-265	Vac	
Ac input voltage frequency	47~63	Hz	
Input impulse current	≤100	A	
Maximum input current	≤6.0	A	
PFC	0.5	/	



Output characteristic			
project	The technical requirements	unit	
Charging voltage (CV)	14.6V±0.2V	Vdc	
Output constant current (CC)	25.0±0.9	A	
stabilized voltage precision	±0.2V	/	
Shutdown Current	1.1±0.5	A	
efficiency	≥90%	/	Vin=220Vac, Full load
Protection Features			
Quick Details	The technical requirements	Remark	
Output overvoltage protection	14.6V±0.2	Lock no output	
Output current limiting protection	25.0±0.9A	@CC MODE	
Output short circuit protection	Automatic output recovery after short circuit removal		
Overheating protection	When the internal temperature of the charger reaches the over-temperature protection point, the charger will automatically stop charging		
Output reverse protection	When the positive and negative poles of the battery are reversely connected to the output end of the charger, the charger will be protected. After the positive and negative poles are correctly connected, the charger will return to normal.		
Battery breaker	When the battery is broken, the battery cannot be full		



Charging indicator switch status:

- Standby mode: traffic lights flash alternately
- Charging: LED red light flashes, connect the battery
- Charging > 80%: yellow light flashes
- Green light flashing 98% charged
- Charging completed: the green light is always on, the fan stops

NOTE: The charger software automatically adjusts the charging current according to the battery voltage.

Safety and EMC Characteristics:

Project		Standard (or test conditions)	Remark
The electric strength	input-output	1500Vac/10mA/1min	No flashover, no breakdown
	Input - earth	1500Vac/10mA/1min	
	Input - earth	500Vdc/10mA/1min	
Insulation resistance	input-output	$\geq 10\text{M}\Omega@500\text{Vdc}$	
	Input - earth	$\geq 10\text{M}\Omega@500\text{Vdc}$	
	Input - earth	$\geq 10\text{M}\Omega@500\text{Vdc}$	
Leakage current		<3.5mA	Vin=264Vac, 60Hz

Environmental Test Requirements:

Project	The technical requirements	Remark
High temperature work	+40°C	Normal performance after 24 hours of operation
Work low temperature	-10°C	Normal performance after 24 hours of operation
High temperature storage	+65°C	Normal temperature restored two hours, normal work
Low temperature storage	-20°C	Normal temperature restored two hours, normal work
vibration	5-9hz, with an amplitude of 3.5mm; 9-200hz, acceleration 10m/s ² . 3 axials, frequency sweeping	(1) components (2) appearance (3) indicators



	vibration 5 times in each. direction (about 3 50 minutes);	
impact	Pulse contact time 6mS; Acceleration 250m/s ² . Six faces, 500 collisions in each direction;	(1) components (2) appearance (3) indicators

Mechanical Properties and connectors:

- Shell material: aluminum alloy
- Shell size: length width height =L194 *W124 *H104 (mm)
- Input power cord: 1.1m ±0.2M
- Output line: 1.1m±0.2M
- Weight: 2Kg
- Protection class : IP65
- Internal process: AB glue filling and sealing treatment
- Input connector: American Standard, European standard, Japanese standard, etc. (optional)
- Output connector: Anderson 50A Anderson 120a 175A alligator clip (optional)

