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Specification of Battery Charger

24V - 4A AGM/ GEL BATTERY CHARGER



1. General

Battery Charger can work normally under 29.4 Vdc/4A and with reverse polarity protection.

2. Main product specification

Max.output power	Input voltage	Output voltage	Combined regulation	Output current	Combined regulation
120W	180_220Vac	29.4V+/-0.2Vdc	+/-0.2V	4A	+/-0.2A

3. Environmental condition

No.	Item	Technical specification	Remark
1	Humidity	5~95%	With package
2	Altitude	≤3000m	Work normally

4. Electrical characteristics

4.1 Input characteristic

No.	Item	Technical specification	Remark
1	Rated input voltage	220Vac	230Vac
2	Input voltage range	180~240Vac	
3	AC input voltage frequency	50～60 Hz	

4.2. Output characteristic or charge stages

No.	Item	Technical specification	Remark

1	**CC(constant current)**	**≤29.4Vdc, 4A**	
2	**CV(constant voltage)**	**29.4Vdc, 4A↓**	
3	**Float stage**		**5%CC**
4	**Power efficiency**	**≥90%**	**Vin=230Vac,rated load**

4.3 Protection characteristics

No.	Item	Technical specification	Remark
1	Over voltage protection	Yes	
2	Software over voltage protection	The charger software limits the maximum output voltage to a level suitable for the connected battery system.	
3	Thermal protection	Yes	
4	Current limiting protection	Yes	At CC mode
5	Short circuit protection	Short circuit protection should be automatically recovery after remove the condition.	
6	Reverse polarity protection	When output wires are reversely connected to the battery the charger will not operate and will work normally when DC wires are correctly connected.	

4.4 Charging indicator

No.	Item	Status	Remark
1	Power on	LED1: Red	
2	Charging	LED2: Red	
3	Fully charged	LED2: Green	
4	Charging Voltage Display	no	
5	Charging Current Display	no	

5. Safety & EMC

No.	Item		Standard (or test condition)	Remark
1	Electric strength test	Input-output	1500Vac/10mA/1min	No breakdown
2	Isolation resistance	Input-ground	≥10Mohm@500Vdc	
		Output-ground	≥10Mohm@500Vdc	
3	Leakage current		＜3.5mA	Vin=264Vac
4	LVD		EN60335-1:2002+EN60335-2-29:2002	

Remark: Discrimination A- Function OK under technical requirement range;

Discrimination R- Physical damage or failure of equipment are not allowed, but damage of protection device (fuse) caused by interference signal of outside is allowed, and the whole equipment can work normally after replacement of protection device and reset of running parameter

6. Environmental testing requirements

No.	Item	Technical specification	Remark
1	High temperature ambient operating	+40℃	Features OK
2	Low temperature ambient operating	-10℃	Features OK
3	High temperature storage	+70℃	Work normally after recovery under normal temperature for 2 hours
4	Low temperature storage	-40℃	Work normally after recovery under normal temperature for 2 hours
5	Random vibration	20Hz to 2000Hz 3Grms 20hours per axis	
6	Repetitive shock	40g peak 3 orthogonal axes, 3+ and 3- in each axis, 11ms pulse width	
7	Thermal shock	-35℃ to 75℃, ＜3min transition, 2.5hours dwell, 200cycle	
8	Drop test	BS EN60068-2-32:1993 TEST ED: free fall appendix B	

7. Mechanical characteristic :

Shell material: ABS

Outline dimension: L*W*H=165×90×55mm

Input socket: meets 3C standard

AC wires: 70 centimeters

DC wire: 70 centimeters

Net Weight: 480g

8. Package, transportation & storage

8.1 Package: There is product name, model, name of manufacturer, safety approval, serial number, User Manual and packing list in the package box.

8.2 Transportation：

Suit for transportation by truck, the products should be shielded by tent from sunshine, and loaded and unloaded carefully.

8.3 Storage：

Products should be stored in package box when it is not used. And warehouse temperature should be -40~70℃, and relative humidity is 5~95%. In the warehouse, there should not be harmful gas, inflammable, explosive products, and corrosive chemical products, and strong mechanical vibration, shock and strong magnetic field affection. The package box should be above ground at least 20cm height, and 50cm away from wall, thermal source, and vent. Under this requirement, product has 2 years of storage period, and should be rechecked when over 2 years.

9. Reliability requirements

MTBF (standard, environmental temperature, load requirement) ≥50K hours;

testing condition: 25℃,full load, testing proved value.

10. Charging Curve

