



Spec. of Charger

Customer		Product	Lithium Battery Charger
Model No.	BQ-1680W84V/84V20A	Product No.	BQ-84V20A-001

Updating History

Version	Date	Before update	After Update	Reason for update
V1.0	May 8, 2019			



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Please sign back this spec. before manufacturing, or it will be deemed all the content has been confirmed by the buyer.

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Electrical Specification

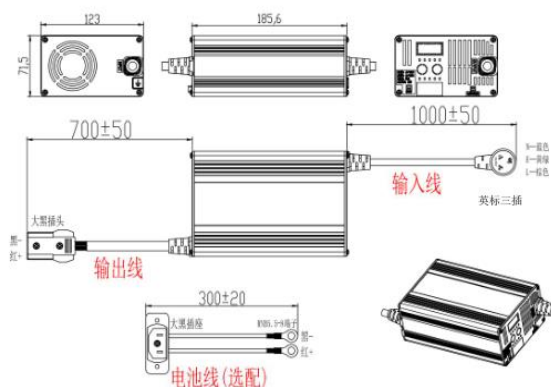
1. Brief Introduction

Size

length 185.6mm±1.5mm
width 123.0mm±1.5mm
height 71.5mm±1.5mm

Weight

<2.0KG



2. Main Technical Parameters

SerialNo.	Item	Parameter
1	Max Output Power	1680W
2	Input Voltage	AC 220V
3	Output Voltage	DC 84V
4	Output Current	20A ± 1 A

3. Environmental characteristics

Serial No.	Item	Technical specification	Remark
1	Humidity	5~95%	With package
2	Altitude	≤1000m	Work normally

4. Electrical characteristics

4.1 Input Characteristics

Serial No.	Item	Technical specification	Remark
1	Rated input voltage	AC 220V	
2	Input voltage Range	AC 185V-255V	
3	Frequency	47/63Hz	
4	FAN	Start and stop is controlled intelligently by charger	

4.2 Output Characteristics

Serial No.	Item	Technical specification	Remark
1	output voltage	DC 40 - 84V	
2	output current	1-20A	
4	Power efficiency	$\geq 91.5\%$	50%-100% Load, rated input voltage

4.3 Protection characteristics

Serial No.	Item	Technical specification	Remark
1	Input over voltage	$> 265V$ AC	
	Input under voltage	$< 175V$ AC	
2	Input over voltage	$85 \pm 0.1V$ DC	
	Input under voltage	$40.0 \pm 0.1V$ DC	
3	Over temperature protection	$80^{\circ}C$ (Automatically recharge when temperature is lower than $60^{\circ}C$ and output is switched off when temperature is higher than $80^{\circ}C$)	
	soft start up	1 - 3S	
4	Short circuit protection	DC output side short circuit, charger not working, and warning, after troubleshooting, restart after automatic recovery	



Electrical Specification

4.4 Charging indicator

Note: all lights are LED

Serial No.	Status	Charging Indicator
1	charged less than 90%	Red light flashes (one second interval)
2	charged over 90%	Green light flashes (one second interval)
3	fully charged 100% or stand by status	Green light always on

4.5 Faults Displaying

Note: "-" means the indicator light turn off for one second

Serial No.	LED Indicator	Faults Description
1	Red green - - - - -	over current protection
2	Red green red - - - - -	over voltage protection
3	Red green red green - - - - -	over temperature protection
4	Red green red green red - - - - -	Battery reverse connection
5	Red green red green red green - - - - -	wrong battery
6	green red - - - - -	External temperature sensor error
7	green red green - - - - -	Battery Overheating
8	green red green red - - - - -	charger fault



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5. Safety

Serial No.	Item		Standard (or test condition)	Remark
1	Electric strength test	Input-output	1500Vac/5mA/2S	No breakdown
2	Isolation resistance	Input-ground	$\geq 10\text{Mohm}@500\text{Vdc}$	Normal conditions
		Output-ground	$\geq 10\text{Mohm}@500\text{Vdc}$	

6. Voltage Limit and Current Limit

6.1 Voltage Limit

When the charger is running in a constant current state, when the output DC voltage reaches the set value of the voltage limit, it automatically limits the increase of its output voltage and convert to a constant voltage charging operation.

6.2 Current Limit

When the charger is running under constant voltage, when the output DC current reaches the current limiting setting value, it enter the current limiting state immediately and automatically limit the increase of its output current.



Electrical Specification

7. Environment features

Serial No.	Item	Technical specification	Remark
1	Highest working temperature	+ 45°C	Features OK
2	Lowest working temperature	- 15°C	Features OK
3	Highest storage temperature storage	+ 70°C	Work normally after recovery under normal temperature for 2 hours
4	Lowest storage temperature storage	- 40°C	Work normally after recovery under normal temperature for 2 hours

8. Packing, Delivery and Storage

8.1 Packing

Inner box and outer cartoon box packing

8.2 Delivery

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°C, 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.