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CL4Y Ladegeräte

Specification of Battery Charger

Model Number: EJ400A-15LRS (EJ1210JL)

LITHIUM BATTERY CHARGER

(Aluminium Case)



Doc No: SPE-BC-0151

Prepared	Checked	Approved
Sara	Jess	John

1. General

Battery Charger EJ400AL-15LRS,200*100*68mm aluminum shell charger with reverse polarity protection function.

2. Main product specification

Max. output power	Input voltage	Max Output voltage	Output current
400W	180-264Vac	14.6V±0.2Vdc	10A±5%

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	
2	Input voltage range	180~ 264Vac	
3	AC input voltage frequency	50~60 Hz	

4.2 Output characteristic or charge stages:

No.	Item	Technical specification					Remark	
1	Nominal voltage	<input checked="" type="checkbox"/> 12V	<input type="checkbox"/> 24V	<input type="checkbox"/> 36V	<input type="checkbox"/> 48V	<input type="checkbox"/> 60V		
2	Max. output Voltage (Vout)	<input type="checkbox"/> Ni-MH	15V	30V	45V	60V	45V	
		<input type="checkbox"/> Li-MnO ₂	16.8V	29.4V	42V	54.6V	42V	
		<input checked="" type="checkbox"/> LiFePO ₄	14.6V	29.2V	43.8V	58.4V	43.8V	
	CC (constant current)	≤Vout	≤Vout	≤Vout	≤Vout	≤Vout		
		10A	12A	8A	6A	5A		
3	CV (constant voltage)	Vout, 10A ↓	Vout, 15A ↓	Vout, 8A ↓	Vout, 6A ↓	Vout, 5A ↓		
4	Transition Current	Vout, 0.2A →0	Vout, 0.8A →0	Vout, 0.4A →0	Vout, 0.3A →0	Vout, 0.3A →0	5%CC	
5	Power efficiency	≥85%	≥85%	≥85%	≥85%	≥85%	Vin=220Vac, rated load	

4.3 Protection characteristics

No.	Item	Technical specification	Remark
1	Software over voltage protection	The charger output voltage does not exceed set the maximum charging voltage of the battery.	
2	Thermal protection	NO	
3	Current limiting protection	The charger output current does not exceed a set battery charge current.	At CC mode
4	Short circuit protection	Short circuit protection should be automatically recovery after remove the condition.	
5	Reverse polarity protection	When output wires are reversely connected to the battery the charger will not operate and will work normally by changing the fuse .	

4.4 Charging indicator

No.	Item	Status	Remark
1	Power on	LED1: Red LED2: Green	
2	Charging	LED1: Red LED2: Red	
3	Fully charged	LED1: Red 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 $\geq 10\text{Mohm}@500\text{Vdc}$	
		Output-ground $\geq 10\text{Mohm}@500\text{Vdc}$	
3	Leakage current	$< 3.5\text{mA}$	
4	Safety	CE	
5	EMC	EN55022class B EN61000	
6	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 environmental temperature ambient operating	+45°C	Features OK
2	Low environmental temperature ambient operating	-10°C	Features OK
3	High temperature storage	+70°C	Work normally after recovery under normal temperature for 2 hours
4	Low temperature storage	-40°C	Work normally after recovery under normal temperature for 2 hours
5	Random vibration	20Hz to 500Hz Acceleration 0.49	
6	Repetitive shock	10Hz to 60Hz Amplitude 0.38	
7	Thermal shock	-35°C to 75°C, <3min transition, 2.5hours dwell, 200cycle	
8	Drop test	BS EN60068-2-32:1993 TEST ED: free fall appendix B	

7. Mechanical characteristics

Mechanical characteristic:

Shell material: Aluminum

Outline dimension: L*W*H=200*100*68mm

Input socket: meets IEC standard

AC wires: 1.5m length

DC wire: 1.5m length

Net Weight: 1.5Kg

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.

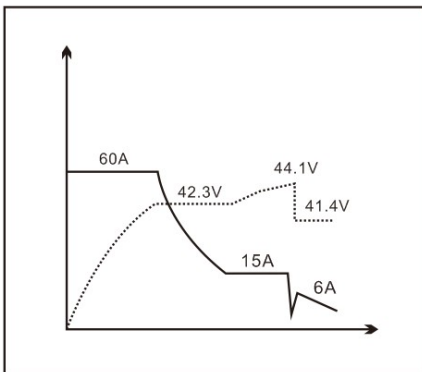
8.3 Storage:

Products should be stored in package box when it is not used. And Warehouse extreme temperatures should be $-40 \sim 70 \text{ }^{\circ}\text{C}$, the normal temperature $-20 \sim 50 \text{ }^{\circ}\text{C}$, 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.

9. Reliability requirements

MTBF(standard, environmental temperature, load requirement) $\geq 50\text{K}$ hours;
testing condition: 25°C , full load, testing proved value.

10. Charging Curve



Remark:

1. Add numerical control.
2. Add auxiliary plate.
3. The charger output voltage does not exceed set the maximum charging voltage of the battery. The charger will resume charging, when the battery voltage down to 13V.