Doku	32_113	**Datenblatt Ladegerät 57.4V 6A Li-Ion**	Maurer Elektromaschinen Ruederstrasse 6 5040 Schöftland Tel. +41(0)62 721 44 84 Fax. +41(0)62 721 44 85 info@maurelma.ch	Maurer Elektromaschinen www.maurelma.ch
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Specification of Battery Charger

KP-400AL

KP-400AL series

LITHIUM BATTERY CHARGER

(Aluminum enclosure)

1. General

KP-400AL 200×100×68mm。

The series KP-400AL,200*100*68mm aluminum shell charger with reverse polarity protection function.

2. Main product specification

Model		☐ KP-400AL-12	☐ KP-400AL -24	☐ KP-400AL-36	■ KP-400AL-48	☐ KP-400AL-60	
Max output voltage	☐ Ni-MH	15V±0.2	30V±0.2	45V±0.2	60V±0.2	73.5V±0.2	
	■ Li-ion	14.6V±0.2	29.2V±0.2	43.8V±0.2	57.4V±0.2	73.5V±0.2	
Output current		20A±5%	15A±5%	8A±5%	6A±5%	5A±5%	
Max. output power		400W					
Input voltage		☐90-132Vac ■200-240Vac ☐90-260Vac					

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	☐110Vac ■220Vac	
2	Input voltage range	☐90-132Vac ■200-240Vac ☐90-260Vac	
3	AC input voltage frequency	50～60 Hz	

4.2 Output characteristic or charge stages

No.	Item		Technical specification						Remark
1	Nominal voltage		☐12V	☐24V	☐36V	■48V	☐60V		
2	(Vout)	☐Ni-MH	15V	30V	45V	60V	73.5V		
		■Li-ion	14.6V	29.2V	43.8V	57.4V	73.5V		
	CC (constant current)		≤Vout	≤Vout	≤Vout	≤Vout	≤Vout		
			20A	12A	8A	6A	5A		
3	CV (constant voltage)		Vout, 20A↓	Vout, 15A↓	Vout, 8A↓	Vout, 6A↓	Vout, 5A↓		
4	Transition Current		Vout, 1A→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%		=220Vac, 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 when DC wires are correctly connected.	

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	

4.5 Environmental testing requirements

No.	Item	Technical specification	Remark
1	High environmental temperature ambient operating	+40℃	Features OK
2	Low environmental 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. 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: 1.2Kg

6. Package, transportation & storage

6.1 Package:

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

6.2 Transportation:

Suit for transportation by truck, the products should be Placed in cool dry place, and loaded and unloaded carefully.

6.3 Storage:

Products should be stored in package box when it is not used. And Warehouse extreme temperatures should be -40 ~ 70 ℃, the normal temperature -20 ~ 50 ℃, 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.

7. Reliability requirements

MTBF (standard, environmental temperature, load requirement) ≥50K hours;
testing condition: 25℃,full load, testing proved value.

8. Charging Curve