

# PA/PB-120 Series

120W Single Output Battery Charger or Power Supply



PCB: 144 x 90 x 33mm  
Case: 180 x 96 x 49mm

## Features

- AC input range selected by switch
- Built-in passive PFC function compliance to EN61000-3-2
- With AC ON-OFF switch
- 3 poles AC inlet with fuse holder
- Protections: Short circuit / Over Load / Over voltage / Over Temperature
- Charger type can be selected (Optional)
- Charger for Lead-acid batteries
- 2 colour LED loading indicator
- Open frame models available (Without safety approval)
- Low cost/High Reliability
- 2 years warranty



## Specification

INPUT	<b>Voltage Range</b>	88 ~ 132VAC 176 ~ 264VAC selected by switch		
	<b>Frequency Range</b>	47 ~ 63Hz		
	<b>Power Factor</b>	>0.65 (with PFC series)		
	<b>AC Current</b>	3A/115VAC 1.5A/230VAC		
	<b>Inrush Current (Typ.)</b>	Cold Start 25A/115VAC		
	<b>Leakage Current</b>	<1.5mA/240VAC		
OUTPUT	<b>MODEL No.</b>	PA/PB-120 □ -13 □	PA/PB-120 □ -13 □	PA/PB-120 □ -13 □
	<b>DC Voltage</b>	13.8V	27.6V	55.2V
	<b>Rated Current</b>	7.2A	4.3A	2.2A
	<b>Current Range</b>	0 ~ 7.2A	0 ~ 4.3A	0 ~ 2.2A
	<b>Rated Power</b>	99.36W	118.68W	121.44W
	<b>Efficiency</b>	73%	79%	79%
	<b>LED Indicated</b>	PA series voltage 105% 10%↓: RED / 105% 10%↑:GREEN PB series load 46% 10%↓: GREEN / 46% 10%↑:RED		
	<b>Overload</b>	90 ~ 110% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed		
PROTECTION	<b>Over Voltage</b>	15~17V	30~35V	60~66V
	<b>Over Temperature</b>	RTH2 ≥70°C ±10°C detect on RTH2 thermistor Protection type : Shut down o/p voltage, recovers automatically after temperature goes down		
	<b>Working Temperature</b>	-10 ~ +45°C (Please refer to 'Operating Curve' section)		
ENVIRONMENT	<b>Working Humidity</b>	20 ~ 90% RH non-condensing		
	<b>Storage Temperature</b>	-20 ~ +85°C, 10 ~ 95% RH		
	<b>Temp Coefficient</b>	±0.05%/°C (0 ~ 45°C)		
	<b>Vibration</b>	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes		
SAFETY & EMC	<b>Safety Standards</b>	UL60950-1, TUV EN60950-1, EN60335, EN60335-1, EN60335-2-29 approved		
	<b>Withstand Voltage</b>	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC		
	<b>Isolation Resistance</b>	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC		
	<b>EMI conduction &amp; radiation</b>	Compliance to EN55022 (CISPR22) Class B		
	<b>Harmonic Current</b>	Compliance to EN61000-3-2,-3		
OTHERS	<b>EMS Immunity</b>	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, light industry level, criteria A		
	<b>M.T.B.F.</b>	149.6K hrs min. MIL-HDBK-217F (25°C)		
	<b>Packing</b>	1.1Kg; 16pcs / 17.9Kg / 1.47CUFT(without PFC) 1.24Kg; 16pcs / 20.1Kg / 1.47CUFT(with PFC)		

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple and Noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with 0.1uf & 47uf parallel capacitor.
3. Tolerance: includes setup of tolerance, line regulation and load regulation.
4. The power supply is considered as a component which will be installed into final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to 'EMI testing of component power supplies.'
5. With PFC I/P range: 95~132VAC/190~264VAC
6. For open P.C.B with 17.8CFM min. Forced air.

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## Mechanical Diagram

Case No. PS-120A Unit:mm

### CASE:

Output cable length=183cm±5cm

Pin No.	Assignment
1	DC OUTPUT +V
2,3	DC OUTPUT -V

### PCB:

AC Input Connector (CN1) : JST B3P-VH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	AC/L	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	No Pin		
3	AC/N		

DC Output Connector (CN3) : JST B4P-VH or equivalent

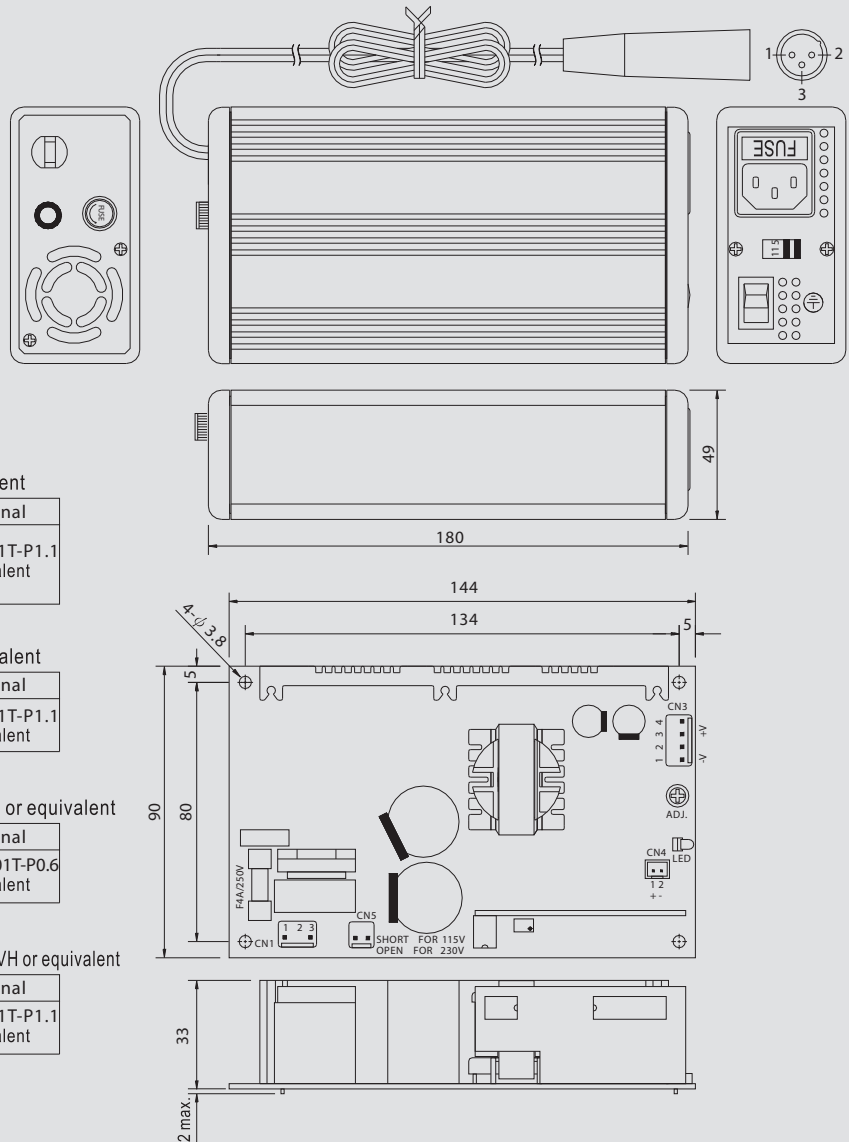
Pin No.	Assignment	Mating Housing	Terminal
1,2	-V	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
3,4	+V		

12VDC FAN Output Connector (CN4) : JST B2B-XH or equivalent

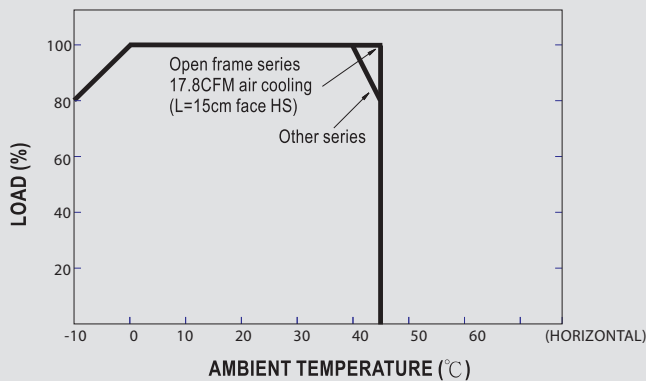
Pin No.	Assignment	Mating Housing	Terminal
1	+V	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
2	-V		

115/230V selected by switch Connector (CN5) : JST B2P-VH or equivalent

Switch	Assignment	Mating Housing	Terminal
115V	Short	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
230V	Open		



## Derating Curve



## Charging Curve

