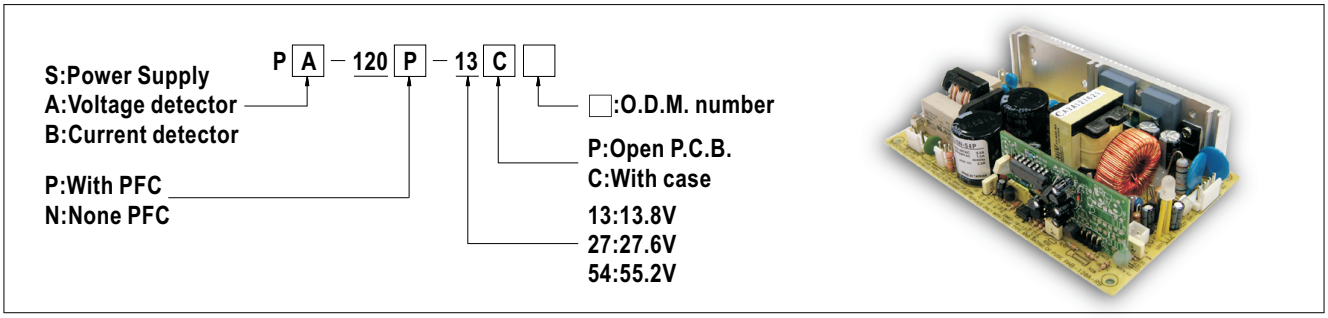
120W Single Output Power Supply or Battery Charger

PS-120 series

■ 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 color LED loading indicator
- Open frame available
- Low cost, High reliability
- 2 years warranty



SPECIFICATION

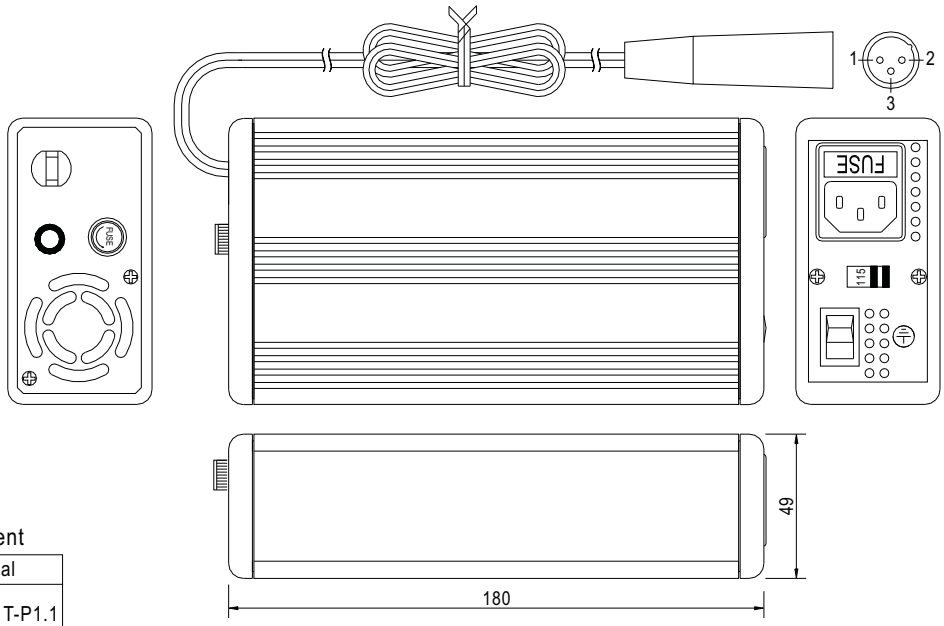
MODEL		PS-120-13P/C	PS-120-27P/C	PS-120-54P/C
OUTPUT	DC VOLTAGE	13.8V	27.6V	54V
	RATED CURRENT	7.2A	4.3A	2.2A
	CURRENT RANGE	0 ~ 7.2A	0 ~ 4.3A	0 ~ 2.2A
	RATED POWER	99.36W	118.68W	118.8W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	200mVp-p	250mVp-p
	VOLTAGE ADJ. RANGE	12 ~ 15V	24 ~ 30V	48 ~ 60V
	VOLTAGE TOLERANCE Note.3	±3.0%±8.5%	±1.0%±8.0%	±1.0%±7.5%
	LINE REGULATION	±1.0%	±1.0%	±1.0%
	LOAD REGULATION	1.0%±6.0%	1.0%±5.0%	1.0%±5.0%
	SETUP, RISE, HOLD TIME	1000ms, 50ms, 16ms at full load		
INPUT	VOLTAGE RANGE	88 ~ 132VAC / 176 ~ 264VAC selected by switch		
	FREQUENCY RANGE	47~63Hz		
	POWER FACTOR	>0.65 (with PFC series)		
	EFFICIENCY (Typ.)	77%/70%	81%/76%	82%/78%
	AC CURRENT	3A/115VAC 1.5A/230VAC		
	INRUSH CURRENT (max.)	COLD START 30A/115VAC 60A/230VAC		
	LEAKAGE CURRENT	<1.5mA / 240VAC		
PROTECTION	OVER LOAD	105 ~ 150% rated output power		
		Protection type : Hiccup mode, recovers automatically after fault condition is removed		
	OVER VOLTAGE	15 ~ 17V	30 ~ 35V	60 ~ 66V
		Protection type : Hiccup mode, recovers automatically after fault condition is removed		
	OVER TEMPERATURE	RTH2≧70℃ ±10℃ Detect on RTH2 thermistor		
		Protection type : Hiccup mode, recovers automatically after fault condition is removed		
ENVIRONMENT	WORKING TEMP.	-10 ~ +45℃ (Refer to output load derating curve)		
	WORKING HUMIDITY	20 ~ 90% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH		
	TEMP. COEFFICIENT	±0.05%/℃ (0 ~ 45℃)		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes		
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV E60950-1, EN60335, EN60335-1, EN60335-2-29 Approved		
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC		
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC		
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B		
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3		
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A		
OTHERS	MTBF	249.5K hrs min. MIL-HDBK-217F (25℃)		
	DIMENSION	PCB Type:144*90*35mm External case type:180*96*49mm (L*W*H)		
	PACKING	1.1Kg; 16pcs / 17.9Kg / 1.69CUFT(without PFC) 1.24Kg; 16pcs / 20.1Kg / 1.69CUFT(with PFC)		

NOTE

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

■ Mechanical Specification

Case No. PS-120A Unit:mm



CASE:
Output cable length=183cm±5cm

Pin No.	Assignment
1	DC OUTPUT +V
2	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

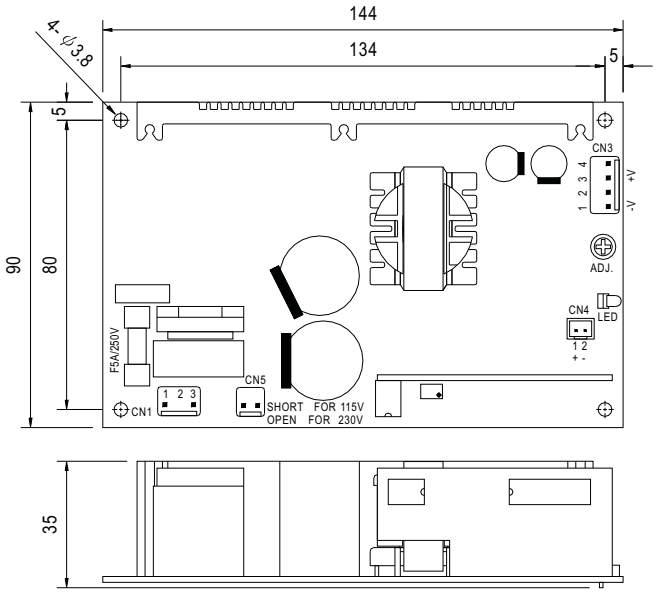
Pin No.	Assignment	Mating Housing	Terminal
1,2	-V	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
3,4	+V		

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

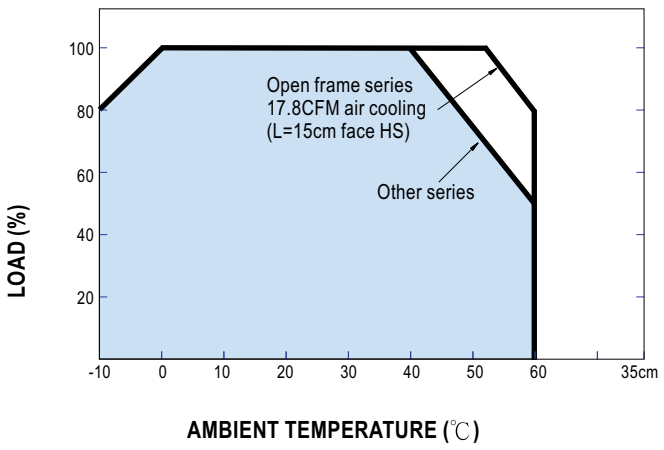
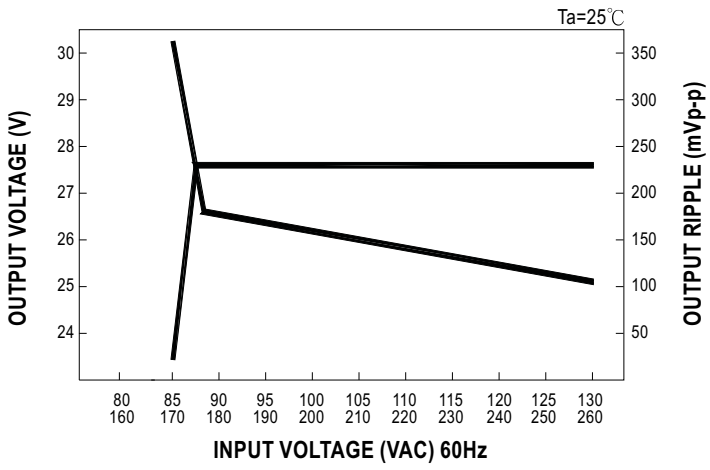
Pin No.	Assignment	Mating Housing	Terminal
1	+V	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
2	-V		

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



■ Static Characteristics (27V)