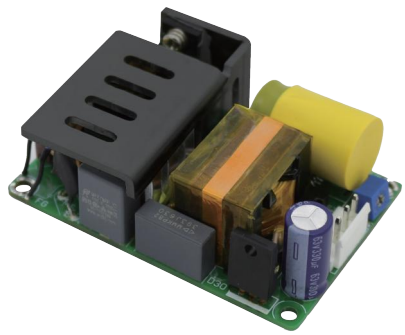
Open-frame Power Supply with Single Output and PFC

120W



- Wide voltage input (90-264VAC, 100-370VDC)
- Dimensions: 76.2*50.8*28.0mm
- Can be installed in CLASS Ⅰ CLASS Ⅱ systems
- Protection types: Short circuit/Overload/Overvoltage
- Naturalaircooling,operatingtemperaturerange:-40℃to+85℃
- Isolation voltage: 4kV
- 100% high-temperature aging and testing
- 3-year warranty

Models

Model	Input Voltage	Rated Power	Output	Rated Current	Ripple Current	Efficiency
PSFC120-12	90-264VAC	114W	12V	9.5A	120 mV P-P	87%
PSFC120-15	90-264VAC	120W	15V	8A	120 mV P-P	88%
PSFC120-24	90-264VAC	120W	24V	5A	150 mV P-P	89%
PSFC120-27	90-264VAC	120W	27V	4.44A	150 mV P-P	90%
PSFC120-36	90-264VAC	120W	36V	3.33A	200 mV P-P	90%
PSFC120-48	90-264VAC	120W	48V	2.5A	200 mV P-P	91%
PSFC120-54	90-264VAC	120W	54V	2.22A	200 mV P-P	91%

Product Datasheet

Input Specifications

Parameter	Min.	Typ.	Max.	Note
Input Voltage Range(AC)	90Vac	-	264Vac	
Input Voltage Range(DC)	100Vdc	-	370Vdc	
Nominal Input Voltage	100Vac	-	240Vac	
Power Factor	0.95	-	-	230Vac Full load
	0.98	-	-	115Vac Full load
Input Current	-	1.5A	-	100Vac Full load
	-	0.8A	-	240Vac Full load
Inrush Current	-	30A	-	115Vac Full load
	-	60A	-	230Vac Full load
Leakage Current	-	0.75mA	-	230VAC/60Hz

Output Specifications

Parameter	Min.	Typ.	Max.	Note
Output Voltage Accuracy	-	±1.0%	±2.0%	Full load
Line Regulation	-	-	±0.5%	Full load
Load Regulation	-	-	±1.0%	10-100% Load
Output Voltage Range	11.4V	-	12.6V	PSFC120-12
	14.8V	-	15.4V	PSFC120-15
	22.6V	-	25.8V	PSFC120-24
	26.5V	-	27.8V	PSFC120-27
	33.8V	-	38.2V	PSFC120-36
	46.3V	-	53.0V	PSFC120-48
	49.7V		56.0V	PSFC120-54
Start-Up Time	-	-	1000mS	230Vac Full load
	-	-	1500mS	115Vac Full load
Rise Time	-	-	40mS	230Vac Full load
	-	-	50mS	115Vac Full load
Hold-Up Time	-	12mS	-	230Vac Full load
	-	15mS	-	115Vac Full load

General Specifications

Parameter	Min.	Typ.	Max.	Note
Operating Temperature	-40℃		+85℃	
Operating Humidity	10% RH		85% RH	
Storage Temperature	-40℃		+85℃	
Storage Humidity	10% RH		85% RH	
Temperature Drift Coefficient		0.03%/(0℃-50℃)		
Vibration Coefficient	10-500Hz, 2G, 10 minutes per cycle, 60 minutes each for X, Y, Z axes			
MTBF	165K hrs min. MIL-HDBK-217F(25℃)			
Product Dimensions	76.2*50.8*28.0mm(L*W*H)			
Product Weight	124g			

Safety&EMC Compliance

Parameter	Standard	Note
Safety Standard	UL62368-1， EN/EN62368-1， IEC62368-1	
Insulation Voltage	I/P-O/P:4KV	
	I/P-FG:2.5KV	
	O/P-FG:0.5KV	
Insulation Resistance	>100M Ohms/500VDC 25℃ 70% RH	
Conduction and Radiation	EN55011， EN55032 (CISPR32) CLASS B	
Electrostatic Discharge	IEC/EN 61000-4-2 level 4 Contact ±8kV/Air ±15kV	
Radio Frequency Radiation Immunity	IEC/EN 61000-4-3 level 4 lev3	
Electrical Fast Transient/Burst	IEC/EN 61000-4-4 level 4 4kV	
Surge	IEC/EN 61000-4-5 level 4 Line-to-Line 2kV /	

Unless otherwise specified, the above data are measured under the conditions of TA=25°C, humidity <75%, nominal input voltage of 230VAC and rated output load.

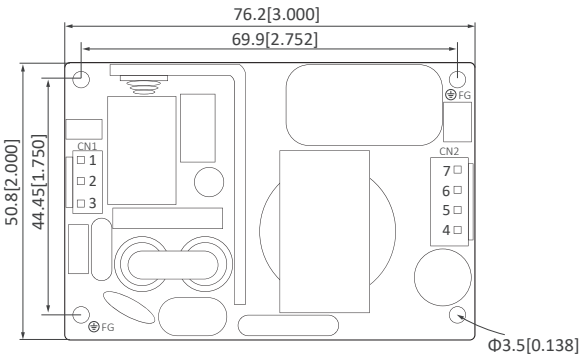
Ripple and Noise Measurement Method
Use the parallel line test method. Meanwhile, a 0.1μF high-frequency ceramic capacitor and a 47μF electrolytic capacitor should be connected in parallel at the terminal, and the measurement should be carried out under a 20MHz bandwidth.

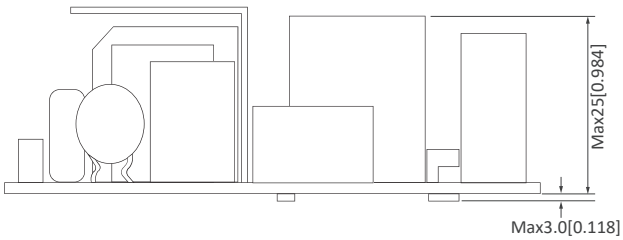
The power supply is regarded as a component within the system, and its electromagnetic compatibility (EMC) verification must be conducted in conjunction with the end equipment.

Protection Specifications

Parameter	Standard	Note
Short-Circuit Protection	Hiccup Mode, self-recoverable after fault elimination	
Overload Protection	≥110% load, self-recoverable after fault elimination	
Over-Temperature Protectio	Reduced power output or no output	
Overvoltage Protection	Protection Coverage ≤16V	PSFC120-12
	Protection Coverage ≤20V	PSFC120-15
	Protection Coverage ≤32V	PSFC120-24
	Protection Coverage ≤35V	PSFC120-27
	Protection Coverage ≤50V	PSFC120-36
	Protection Coverage ≤60V	PSFC120-48
	Protection Coverage ≤72V	PSFC120-54
	Output Shutdown	

Dimensions & Lnterface Definition



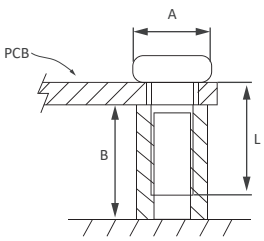


UNIT:mm[inch]

CLASS Ⅰ System: Mounting holes marked with ⏚ must be connected to the safety ground.

CLASS Ⅱ System: Mounting holes marked with ⏚ must be short-circuited.

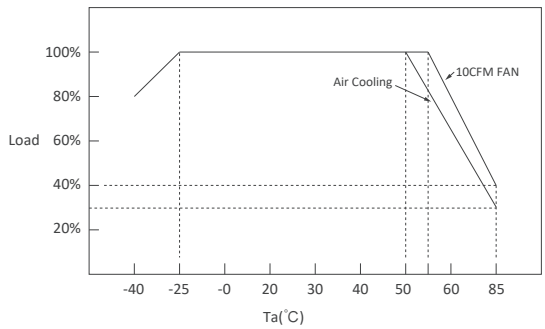
Connector	Pin	Function	Customer Connection Terminal
CN1	1	AC L	Connector: JST VHR ConnectorTerminal: JST SVH-21T-P1.1 or equivalent
CN1	2	No PIN	
CN1	3	AC N	
CN2	4 5	-Vo	Connector: JST VHR ConnectorTerminal: JST SVH-21T-P1.1 or equivalent
CN2	6 7	+Vo	



Installation Recommendation: Use M3 screws. As shown in the diagram, the dimensions shall meet: A < 5.5mm, B ≥ 8mm, L = 6mm.
The tightening torque shall not exceed 0.4N·m.

Electrical Curve

Temperature Derating Curve



Input Voltage Derating Curve