

Open-frame Power Supply with Single Output and PFC
300W



- Wide voltage input (90-264VAC)
- Dimensions: 101.6*50.8*30mm
- Can be installed in CLASS I CLASS II systems
- Protection types: Short circuit/Overload/Overvoltage
- Natural air cooling, operating temperature range: -40°C to +80°C
- Isolation voltage: 3kV
- 100% high-temperature aging and testing
- 3-year warranty

Models

Model	Input Voltage	Rated Power	Output	Rated Current	Ripple Current	Efficiency
PSFC300-12	90-264VAC	300W	12V	25A	120 mV P-P	91%
PSFC300-15	90-264VAC	300W	15V	20A	120 mV P-P	91%
PSFC300-24	90-264VAC	300W	24V	12.5A	240 mV P-P	92%
PSFC300-27	90-264VAC	300W	27V	11.11A	240 mV P-P	93%
PSFC300-36	90-264VAC	300W	36V	8.33A	240 mV P-P	93%
PSFC300-48	90-264VAC	300W	48V	6.25A	240 mV P-P	93%

Products with the suffix "C" are models with a housing.

Product Datasheet

Input Specifications

Parameter	Min.	Typ.	Max.	Note
Input Voltage Range(AC)	90Vac	-	264Vac	
Nominal Input Voltage	100Vac	-	240Vac	
Power Factor	0.95	-	-	230Vac Full load
	0.98	-	-	115Vac Full load
Input Current	-	3.2A	-	100Vac Full load
	-	1.5A	-	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%	-	Full load
Line Regulation	-	-	±1.0%	Full load
Load Regulation	-	-	±1.0%	10-100% Load
Output Voltage Range	11.7V	-	12.4V	PSFC300-12
	14.3V	-	15.8V	PSFC300-15
	22.9V	-	24.8V	PSFC300-24
	26.5V	-	27.8V	PSFC300-27
	33.5V	-	38.0V	PSFC300-36
	45.2V	-	53.5V	PSFC300-48
Start-Up Time	-	-	1000mS	230Vac Full load
	-	-	1500mS	115Vac Full load
Rise Time	-	-	50mS	230Vac Full load
	-	-	50mS	115Vac Full load
Hold-Up Time	-	10mS	-	230Vac Full load
	-	10mS	-	115Vac Full load

General Specifications

Parameter	Min.	Typ.	Max.	Note
Operating Temperature	-40°C	-	+80°C	
Operating Humidity	10% RH	-	85% RH	
Storage Temperature	-40°C	-	+85°C	
Storage Humidity	10% RH	-	85% RH	
Temperature Drift Coefficient	-	0.03%/(0°C-50°C)	-	
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°C)			
Product Dimensions	101.6*50.8*30mm(L*W*H)			
Product Weight	150g			

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Safety&EMC Compliance

Parameter	Standard	Note
Safety Standard	UL62368-1, EN/EN62368-1, IEC62368-1	
Insulation Voltage	I/P-O/P:3KV	
	I/P-FG:2.5KV	
	O/P-FG:0.5KV	
Insulation Resistance	>100M Ohms/500VDC 25°C 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 /Liine-GND 4KV	

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.

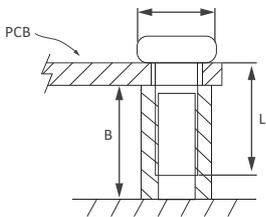
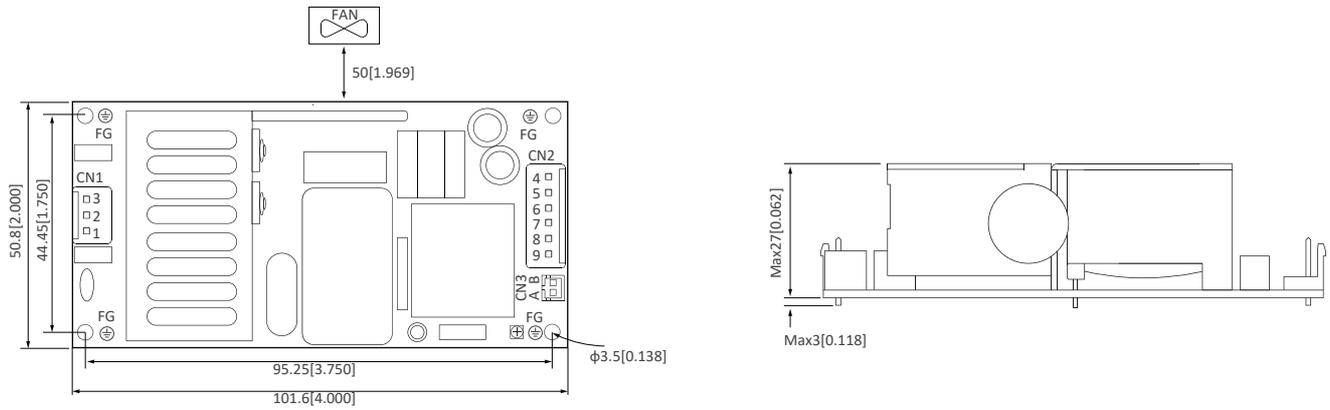
The power supply is regarded as a component within the system, and its electromagnetic compatibility (EMC) verification must be conducted in conjunction with the end equipment.

Protection Specifications

Parameter	Standard	Note
Short-Circuit Protection	Hiccup Mode, self-recoverable after fault elimination	
Overload Protection	110%-170% load, self-recoverable after fault elimination	
Over-Temperature Protectio	Reduced power output or no output	
Overvoltage Protection	Protection Coverage ≤18V	PSFC300-12
	Protection Coverage ≤19.5V	PSFC300-15
	Protection Coverage ≤37V	PSFC300-24
	Protection Coverage ≤38V	PSFC300-27
	Protection Coverage ≤51V	PSFC300-36
	Protection Coverage ≤62V	PSFC300-48
	Output Shutdown	

Product Datasheet

Dimensions & Interface Definition



Installation Recommendation: Use M3 screws. As shown in the diagram, the dimensions shall meet: $A < 5.5\text{mm}$, $B \geq 8\text{mm}$, $L = 6\text{mm}$. The tightening torque shall not exceed $0.4\text{N}\cdot\text{m}$.

Unit of dimension: mm [inch]. Unmarked tolerance: $\pm 0.5\text{mm}$

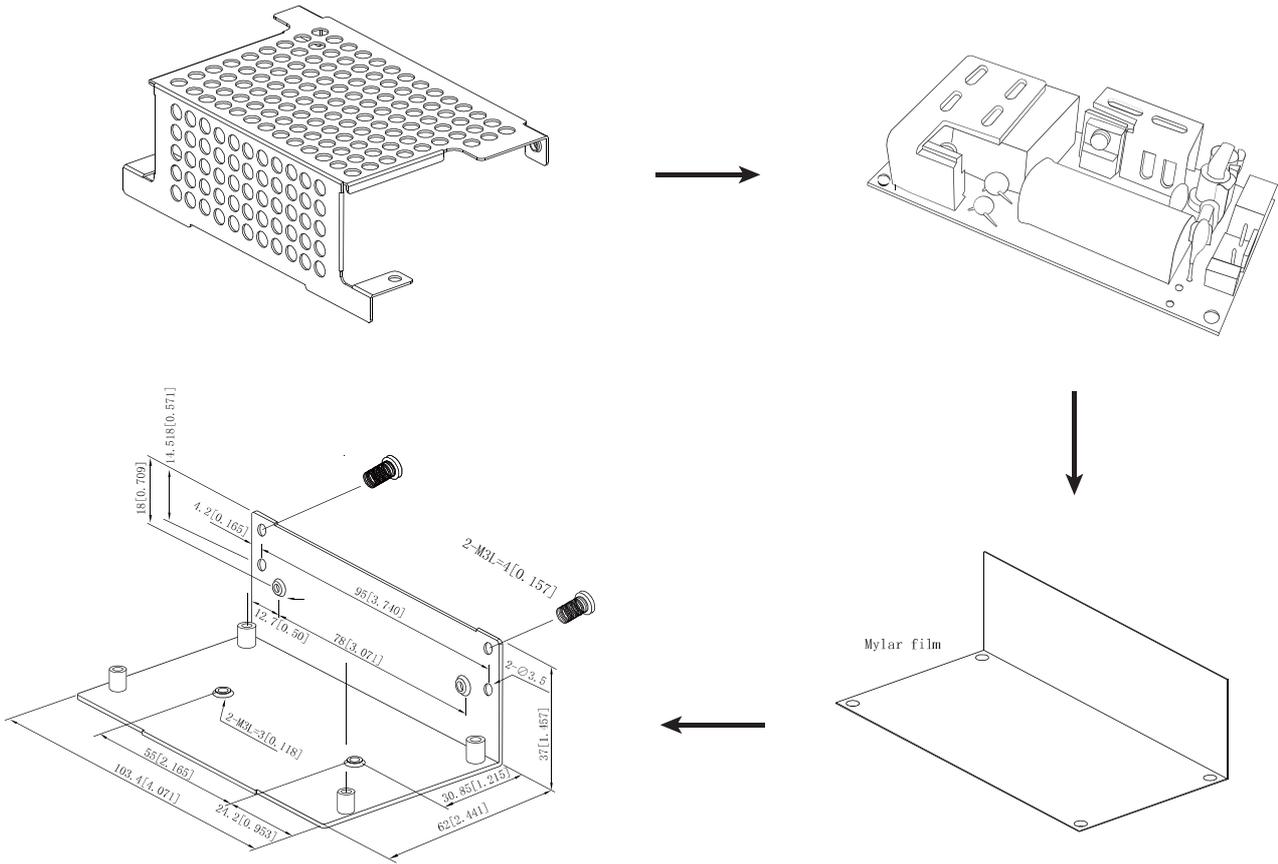
CLASS I system: Mounting holes marked with \oplus must be connected to the protective earth (PE)

CLASS II system: No requirement for protective earth (PE) connection

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 6	-Vo	Connector: JST VHR ConnectorTerminal: JST SVH-21T-P1.1 or equivalent
CN2	7 8 9	+Vo	
CN3	A	DC COM	Connector: 2.5XHS-2Y
CN3	B	+12V	ConnectorTerminal: 2.5XH-TE or equivalent

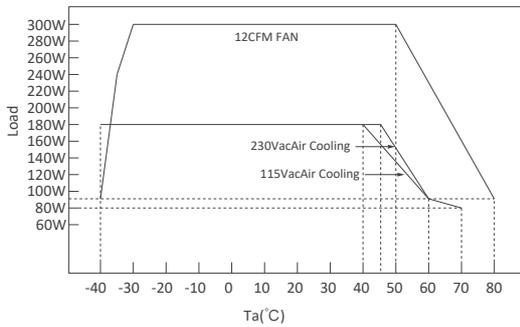
Product Datasheet

Cased Type Dimension Drawing



Electrical Curve

Temperature Derating Curve



Input Voltage Derating Curve

