Open-frame Power Supply with Single Output and PFC

600W

- Wide voltage input (90-264VAC)
- Dimensions: 127*76.2*39mm，5"*3"
- Can be installed in CLASS Ⅰ CLASS Ⅱ systems
- Protection types: Short circuit/Overload/Overvoltage
- Naturalaircooling,operatingtemperaturerange:-40℃to+70℃
- Isolation voltage: 3kV
- 100% high-temperature aging and testing
- 3-year warranty

Models

Model	Input Voltage	Rated Power	Output	Rated Current	Ripple Current	Efficiency
PSFC600-12	90-264VAC	480W	12V	40A	100 mV P-P	93%
PSFC600-15	90-264VAC	600W	15V	40A	100 mV P-P	93%
PSFC600-24	90-264VAC	600W	24V	25A	100 mV P-P	93%
PSFC600-27	90-264VAC	600W	27V	22.3A	120 mV P-P	94%
PSFC600-36	90-264VAC	600W	36V	16.7A	120 mV P-P	94%
PSFC600-48	90-264VAC	600W	48V	12.5A	150 mV P-P	95%
PSFC600-54	90-264VAC	600W	54V	11.2A	150 mV P-P	95%

Please refer to the "Temperature Derating Curve" for the output power. For full-power operation, an external fan is required for forced air cooling.

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	-	6.8A	-	100Vac Full load
	-	3.2A	-	240Vac Full load
Inrush Current	-	40A	-	115Vac Full load
	-	100A	-	230Vac Full load
Leakage Current	-	0.75mA	-	230VAC/60Hz

Output Specifications

Parameter	Min.	Typ.	Max.	Note
Output Voltage Accuracy	-	±2.0%	-	Full load
Line Regulation	-	-	±1.0%	Full load
Load Regulation	-	-	±1.0%	10-100% Load
Output Voltage Range	11.2V	-	13.5V	PSFC600-12
	14.3V	-	15.8V	PSFC600-15
	22.3V	-	25.6V	PSFC600-24
	26.9V	-	29.3V	PSFC600-27
	33.3V	-	37.8V	PSFC600-36
	46.8V	-	52.2V	PSFC600-48
	48.9V	-	54.5V	PSFC600-54
Start-Up Time	-	-	1500mS	230Vac Full load
	-	-	2000mS	115Vac Full load
Rise Time	-	-	60mS	230Vac Full load
	-	-	60mS	115Vac Full load
Hold-Up Time	-	12mS	-	230Vac Full load
	-	12mS	-	115Vac Full load

General Specifications

Parameter	Min.	Typ.	Max.	Note
Operating Temperature	-40℃	-	+80℃	Refer to the "Derating Curve Graph"
Operating Humidity	10% RH	-	85% RH	
Storage Temperature	-40℃	-	+105℃	
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	127*76.2*37mm(L*W*H)			
Product Weight	344g			

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:1.5KV	
	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 /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.

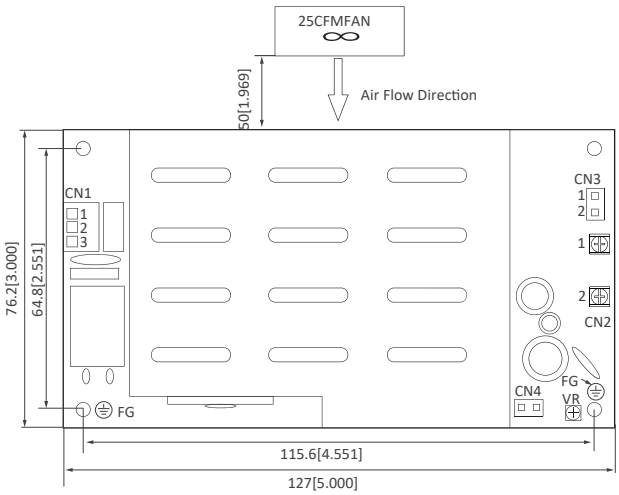
Ripple and Noise Measurement Method
Use the parallel line test method. Meanwhile, a 0.1μF high-frequency ceramic capacitor and a 47μF electrolytic capacitor should be connected in parallel at the terminal, and the measurement should be carried out under a 20MHz bandwidth.

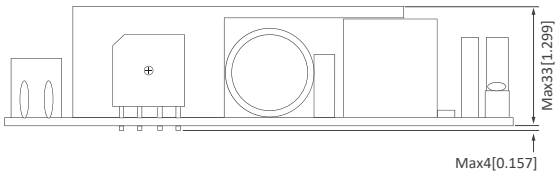
The power supply is regarded as a component within the system, and its electromagnetic compatibility (EMC) verification must be conducted in conjunction with the end equipment.

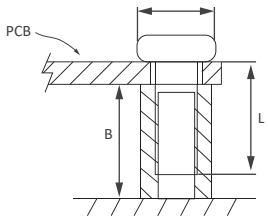
Protection Specifications

Parameter	Standard	Note
Short-Circuit Protection	Hiccup Mode, self-recoverable after fault elimination	
Overload Protection	160%-180% load, self-recoverable after fault elimination	
Over-Temperature Protectio	Reduced power output or no output	
Overvoltage Protection	Protection Coverage ≤15.6V	PSFC600-12
	Protection Coverage ≤19.5V	PSFC600-15
	Protection Coverage ≤31.2V	PSFC600-24
	Protection Coverage ≤35V	PSFC600-27
	Protection Coverage ≤46.8V	PSFC600-36
	Protection Coverage ≤62.4V	PSFC600-48
	Protection Coverage ≤63V	PSFC600-54
	Output Shutdown	

Dimensions & Lnterface Definition







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.

Unit of dimension: mm [inch]. Unmarked tolerance: ±0.5mm
CLASS Ⅰ system: Mounting holes marked with ⏚ must be connected to the protective earth (PE)
CLASS Ⅱ system: No requirement for protective earth (PE) connection

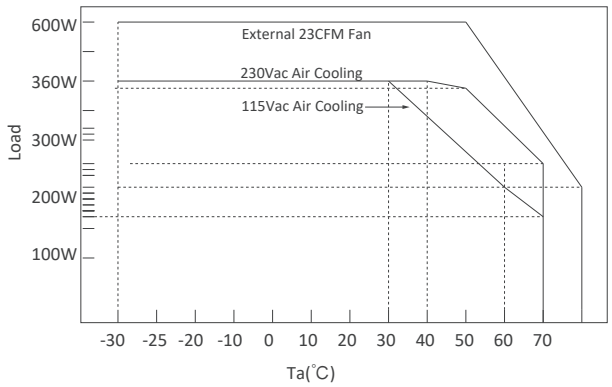
Connector	Pin	Function	Customer Connection Terminal
CN1	1	AC L	Connector: JST VHR ConnectorTerminal: JST SVH-21T-P1.1 or equivalent
CN1	2	No PIN	
CN1	3	AC N	
CN2	1	+Vo	
CN2	2	-Vo	
CN3	1	DC COM	Connectors: TKP DH2-4P, HRS DF11-4DS-2C, or equivalentsTerminals: TKP DHT, HRS DF11-22SC, or equivalents
CN3	2	+12V	
CN4	1	RS-	Connectors: TKP DH2-4P, HRS DF11-4DS-2C, or equivalentsTerminals: TKP DHT, HRS DF11-22SC, or equivalents
CN4	2	RS+	

When using remote compensation, twisted pair cables should be used for the RS+ and RS- leads.

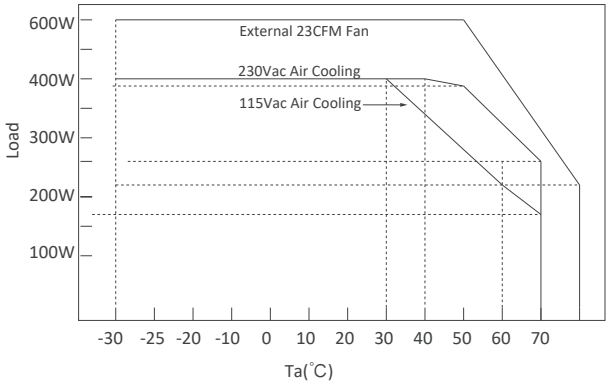
Dimensions & Lnterface Definition

Electrical Curve

Temperature Derating Curve(12-15V)



Temperature Derating Curve(24-54V)



Input Voltage Derating Curve