

❖ APPEARANCE



❖ FEATURES

- Full voltage input range (90-277 Vac)
- 4* 2' inch small size
- Active PFC, no-load power consumption <0.75W
- Can be installed in CLASS I (with PE) and CLASS II (without PE) series
- Included 12V/0.5A auxiliary power supply to drive the external fan
- -40°C-70°C wide operating temperature range
- Meet the work at an altitude of 5000 meters

❖ APPLICATIONS

- Industrial control systems, automation equipment
- Mechanical and electrical equipment
- Electronic instruments, measuring equipment, IoT devices
- Smart Home, Medical Devices

❖ HIGHLIGHTS

- Maximum input voltage: 300Vac
- Protection function: over voltage, short circuit, overload, over temperature
- Peak power: 130% (400W) * 3S
- Moisture-proof process: can improve the reliability of power supply against moisture
- Component selections: International and domestic famous brand components with high reliability
- Warranty: three years

❖ CERTIFICATION



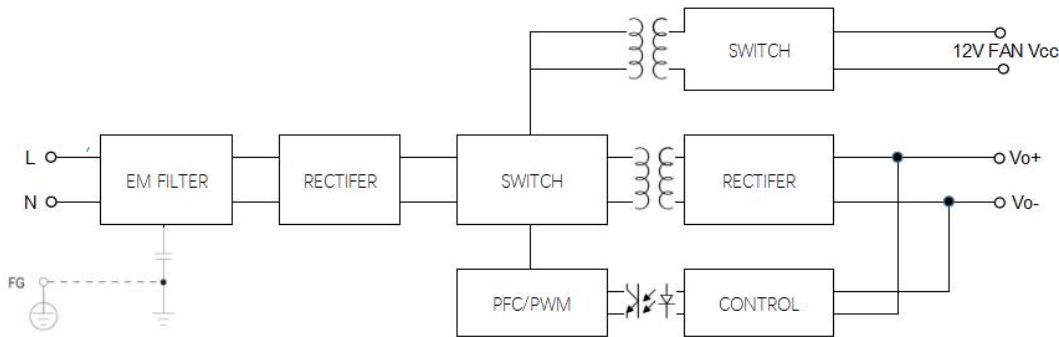
❖ PRODUCT DESCRIPTION

A 300W single-output bare board industrial medical power supply. 4 * 2' inch small size, active PFC technology, Designed with active PFC and moisture-proof construction, certifications refer EN/IEC 62368-1, GB4943.1, and other standards. It incorporates comprehensive protection functions, delivering high quality and reliability.

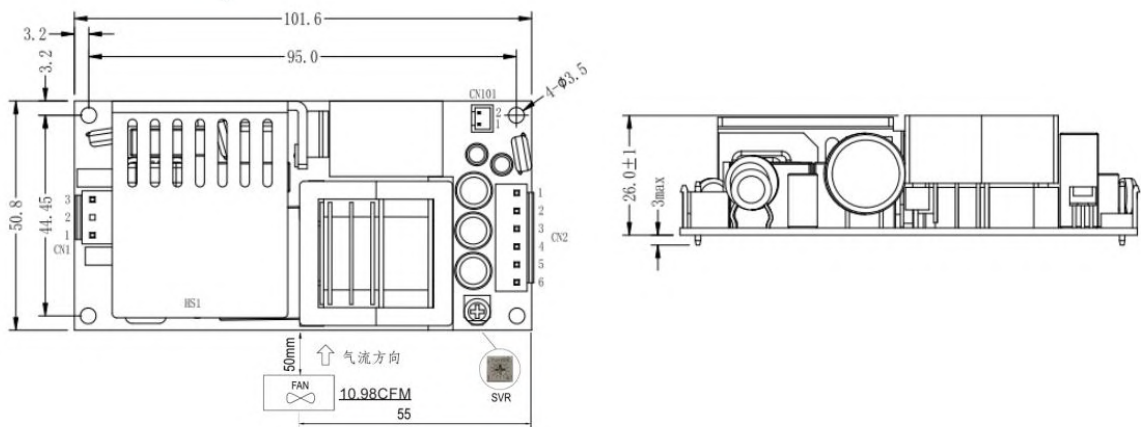
Model		SLOF300-24	SLOF300-48
Output	DC Voltage	24V	48V
	Rated current (with 10.98 CFM fan)	12.5A	6.3A
	Rated power (with 10.98CFM fan)	300W	300W
	Rated Current (natural convection)	6.7A	3.3A
	Rated power (natural convection)	160W	160W
	Peak current(* 3S)	16.7A	8.3A
	Peak power (*3S)	400W	400W
	Ripple&& noise (max.) (Note 1)	200mVp-p	250mVp-p
	Voltage adjustment range	21~27V	42~54V
	Voltage accuracy (Note 2)	±1.0%	±1.0%
	Line Regulation	±0.5%	±0.5%
	Load Regulation	±1.0%	±1.0%
	Capacitor load (max)	10000uF	10000uF
	Set up, rise time	1000ms, 30ms/230Vac; 1500ms, 30ms/115Vac (at full load)	
	Hold up time (typ.)	8ms/230Vac 8ms/115Vac (at full load)	
	Temp. Coefficient	0.02 %/°C (0~50°C)	
	Dynamic response note 3	±5% (Load : 0~100%; Rate: 1.25A/uS; Duty cycle: 10%~90%; Frequency range: 5Hz~10KHz)	
Input	Voltage Range	90 ~ 277Vac 120 ~ 392Vdc	
	Frequency Range	47 ~ 63Hz	
	Power factor	PF>0.95(230Vac) PF>0.98(115Vac)	
	Efficiency (Typ.)	93%	93%
	AC Current (Typ.)	4.5A/115Vac 2.0A/230Vac	
	Inrush Current (Typ.)	Cold start at 25°C with 60A/230Vac	
	Leakage Current	Floor drain current <0.5mA @ 264VAC; Contact leakage current <0.07mA @ 264VAC	
Protection	Output over load	105% to 130% of the rated output power	
		Hiccups mode, recovers automatically after fault condition is removed	
	Output over voltage	28~30V	55~60V
		Shutdown mode, recovers automatically after fault condition is removed	
	Over temperature	Shutdown mode, recovers automatically after fault condition is removed	
	Output short circuit	Hiccups mode, recovers automatically after fault condition is removed	
Function	Auxiliary Power Supply	12V@0.5A, can be given to the fan power supply; voltage accuracy: ±5%	
Environment	Operating Temp.	-30 ~ +70°C(refer to "Derating Curve")	
	Working humidity	20 ~ 90% RH, no condensation	
	Storage	-40 ~ +85°C, 10 ~ 95% RH	
	Vibration	Sine wave: 10 ~ 500Hz, 5G 10 min/cycle, 60 min each X, Y, Z	

	Altitude Note 4	0 to 5,000 Meters(0 to 16,400 ft)
	MTBF	>500Khrs (MIL-HDBK-217F@25°C)
Safety	Safety standards	Refer to IEC/EN 62368-1, GB4943.1
	Withstand Voltage	I/P-O/P:4KVac, I/P-FG:2KVac, O/P-FG:1.5KVac
	Ground Resistance	I/P-O/P,I/P-FG, O/P-FG: $\geq 100\text{M}\Omega$ @ 500VDC (25°C/ 75% RH)
EMC	Conducted Emission	CISPR32/EN55032 CLASS A
	Radiation Emission	CISPR32/EN55032 CLASS A
	Harmonic	IEC/EN 61000-3-2 CLASS A
	ESD Immunity	IEC/EN 61000-4-2 Contact: $\pm 8\text{KV}$, Air: $\pm 15\text{KV}$ Criteria A
	RF Immunity	IEC/EN 61000-4-3 10V/m, Criteria A
	EFT Immunity	IEC/EN 61000-4-4 $\pm 2\text{KV}$, Criteria A
	Surge Immunity	IEC/EN 61000-4-5 DM: $\pm 1\text{KV}$; CM: $\pm 2\text{KV}$; Criteria A
	Conducted Immunity	IEC/EN 61000-4-6 10Vrms, Criteria A
	PFMF Immunity	IEC/EN 61000-4-8 30A/m, Criteria A
	Immunity to voltage dips and short interruptions	IEC/EN61000-4-11 0% (0.5 cycle), 70%(25 cycle), Criteria B
Structure	Shape	101.6*50.8* 25.4mm (L*W*H)
	Weight (Typ.)	200g
	Package (Typ.)	72pcs/16.7Kg/420*230*255mm (L*W*H)
	Indicator light	Green LED (DC OK)
	Input terminal block	JST B3P-VH or equivalent grade
	Output terminal block	JST B6P-VH or equivalent grade
	Fan wiring terminal	JSTB2B-PH-K-S or equivalent grade
NOTE	0.All parameters NOT specially mentioned are measured at 230Vac, rated load, 25°C/75% RH of ambient temperature.	
	1.Ripple and noise : the oscilloscope uses AC coupling measured at 20MHZ of bandwidth,connected in parallel with 0.1uF (ceramic, film) and 47uF low impedance electrolytic capacitors.	
	2. Tolerance: includes set up tolerance,line regulation and load regulation.	
	3. Dynamic response: it is the range of the instantaneous overshoot or drop of the output voltage caused by the instantaneous change of the load	
	4.The ambient temperature drops of 5°C/1000 when working at altitudes above 2000m	
	5. Set-up time is measured at cold first start, rapid and frequent switching on and off may increase the set-up time.	
	6. Switch power supply is part of the customer's system and all EMC testing must be carried out in conjunction with the terminal equipment.	
	All EMC tests should be combined with the terminal equipment for relevant confirmation.	

❖ BLOCK DIAGRAM



❖ STRUCTURE DIAGRAM (±0.5)(mm)

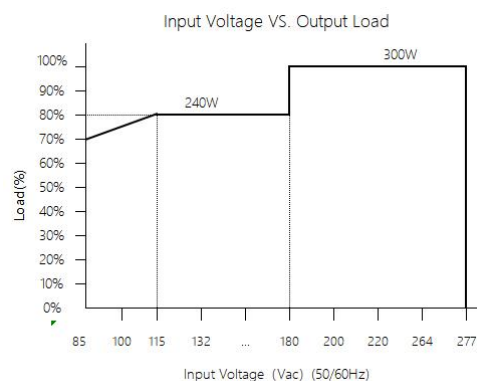
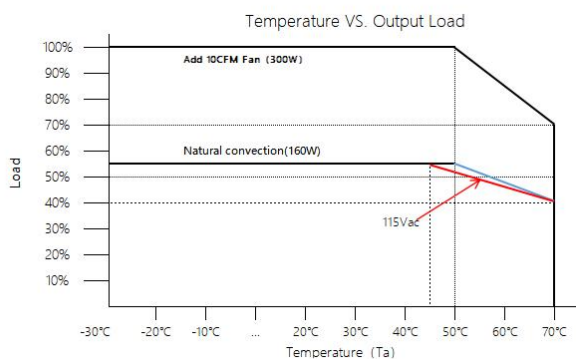


Terminal	CN1			CN2		CN101	
PIN	1	2	3	1~3	4~6	1	2
Function	L	NA	N	V+	V-	12V+	12V-
Remarks	1. The heat sink on the top of PCB should keep a safe distance from the grounding shell to avoid short circuit; the primary and secondary heat sink should not be short circuit 2. The foot length of the bottom part of PCB is 2.5~3mm. When installing, enough safety distance (5~8mm) should be retained at the bottom. It is recommended to add insulation sheet for isolation. To meet EMC requirements, the grounding hole must be grounded.						

❖ WAFER

Position	Pitch	Diagram
CN1	3.96mm	
CN2	3.96mm	
CON101	2.0mm	

❖ PRODUCT CHARACTERISTICS CURVE



❖ PRODUCT APPLICATION NOTES

- ❖ Ensure the power supply PCBA is grounded when in use, otherwise the case may be electrically and EMI may have an effect.
- ❖ Pay attention to the installation position and heat dissipation space of the power supply to ensure the heat dissipation effect of the power supply;
- ❖ The installation method of the user should avoid the short circuit between the bottom part foot and the shell, and keep enough safe distance (more than 5mm);
- ❖ When increase the output voltage, reduce the rated current or assess the total power whether exceeds the rated power.
- ❖ When adjusting the potentiometer, attention to the control torque, it is recommended maximum torque is 0.5kgf.cm; the tool size needs to be controlled, the speed is controlled at: 90°/sec to avoid screw loose.
- ❖ If the power supply is used in high humidity、dusty environment for a long time,it is recommend to choose our coating products.
- ❖ If the power supply is used in an environment with metal shavings, it is recommend that a protective cover be fitted to avoid short circuits.
- ❖ Be careful not to allow any foreign metal, object or conductor to enter the power supply during installation as this may cause electric shock, safety hazards, fire or machine failure

- ✧ Before powering up the product, make sure that the wiring is correctly positioned and securely wired, focusing on the reverse of the inputs and outputs to avoid safety hazards.
- ✧ For your safety, please do not disassemble by yourself if it is energized or malfunctioning;
- ✧ We keep the right to interpret the technical tables of the data parameters in the specifications; if you have any technical questions, please contact us or the supplier on time.