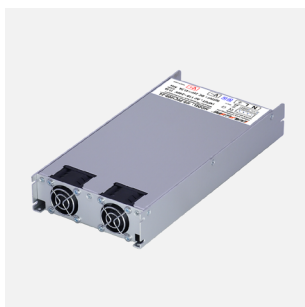


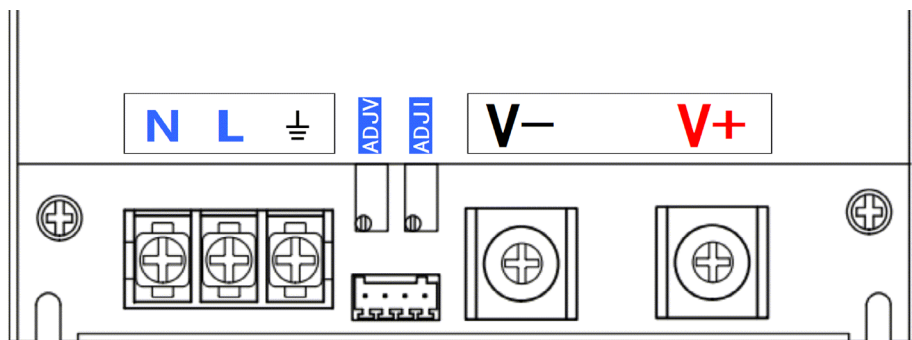
SA-PFC1000 1000W With Active PFC Series Switching Power Supply



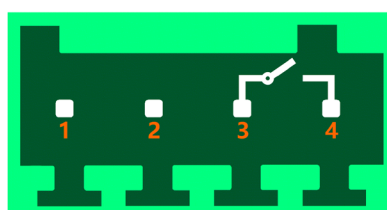
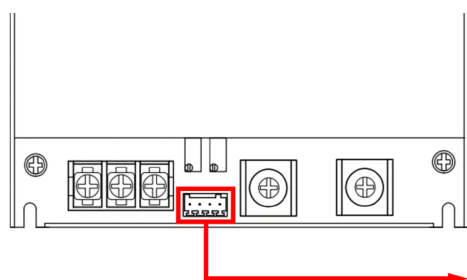
- ◆ With active PFC power factor correction function
- ◆ AC 110-260v wide voltage input
- ◆ Constant pressure and current function
- ◆ Control function of the ps-on output voltage
- ◆ Multilayer board process (4-layer PCB)

Model		SA-PFC 1000-24	SA-PFC 1000-36	SA-PFC 1000-42	SA-PFC 1000-48	SA-PFC 1000-60	SA-PFC 1000-72	SA-PFC 1000-110	SA-PFC 1000-150
Output Parameters	DC Output Voltage	24VDC	36VDC	42VDC	48VDC	60VDC	72VDC	110VDC	150VDC
	Rated Output Current	41.7A	27.8A	23.8A	20.8A	16.7A	14A	9.1A	6.7A
	Rated Output Power	1008W	1008W	1008W	1008W	1002W	1008W	1001W	1005W
	Voltage Regulation Range	14-24.5V	21-36.5V	24-42.5V	27-48.5V	34-60.5V	41-72.5V	62-111V	84-151V
		Note: If the output voltage is lowered, the maximum output current remains unchanged, and the power will decrease							
	Output Overvoltage Protection Value	32V	46V	59V	59V	78V	90V	142V	182V
		Protection method: Turn off the output. Wait for 5 seconds after powering off, then power on again to recover							
	Efficiency (100% load)	88.8%	90%	90%	90.3%	90.6%	90.6%	91%	91.3%
		Note: Efficiency is measured at AC220V input, but when using AC110V input, efficiency will decrease							
	Ripple (full load)	140mv	150mv	150mv	150mv	180mv	200mv	250mv	300mv
		Note: Ripple and noise test method: connect 47uF Electrolytic capacitor and 0.1uF Ceramic capacitor in parallel at the load end (in order to reduce the impact of new external series interference on the test). The Bandwidth throttling of the oscilloscope is limited to 20MHZ, which should be measured from the load end							
	Maximum Capacitive Load	20000uF	15000uF	12000uF	10000uF	6000uF	3500uF	1800uF	1000uF
	Load adjustment rate	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%
	Voltage Accuracy	±3%	±3%	±3%	±3%	±3%	±3%	±3%	±3%
Input Parameters	Start up, Rise time	3S, 60ms/230VAC(At full load) 8S, 60ms/110VAC(At full load)							
	Hold up time	8ms/230VAC(At full load)							
	AC Input Voltage	AC 110-240V							
	AC Input Frequency	47-63Hz							
	Standby Power	7 watts							
	Input Current (maximum)	Full load 1000W output, using 220VAC input, input current 5A Full load 1000W output, using 110VAC input, input current 11A							
Function	Power Factor	At 100% full load, the power factor PF value is ≥ 0.99 (refer to the PF value curve in the figure below)							
	Surge Current	220VAC/40A 110VAC/22A							
	PS-ON	PS-on terminal short circuit: no output voltage of power supply PS-on terminal open circuit : The power supply has an output voltage Note: PS-on can control the power output voltage on and off. When the output voltage is turned off, the power supply is in the low power standby state (7 watts), and only the auxiliary power supply circuit is working inside. The cooling fan will operate normally, not the power supply of 220V input end will be disconnected.							
	Output Voltage Adjust	The output voltage is adjustable, and the potentiometer V is manually adjusted. See the parameters in the above table for the adjustment range							
Function	Output Current Adjust	The output current can be adjusted, the ADJ-A potentiometer manually adjusts, when the load reaches the current setting value, the constant current output (output current remains unchanged, the output voltage is reduced with the load							
	485 Communication	This device has 485 communication capabilities							

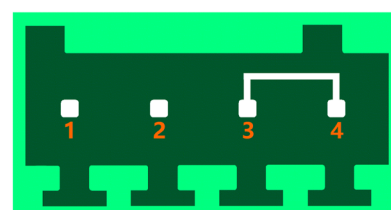
Protection Function	Output Overvoltage Protection	About 130% of the rated output voltage, the output is turned off and will not recover. To disconnect the input power supply, wait for 5 seconds before re energizing to restore		
	Output Short Circuit Protection	1. Short time instantaneous short circuit: Close the output and automatically recover after 3 seconds 2. Long lasting short circuit: Turn off the output and attempt to restart every 3 seconds (burp mode)		
	Output Overload Protection	1. The overload protection method is constant current limiting. When the output is overloaded, the power supply enters constant current mode, keeping the maximum output current constant. The output voltage decreases with the increase of load (note: this power supply does not have short-term peak current OPP, nor does it output overcurrent) 2. When a load of about 3 times the power is connected, it will exceed the range of the overload constant current limit of the power supply. At this time, it is judged as a short circuit, the power supply is turned off, and it will restart every 3 seconds (burp mode)		
	Overheat Protection	1. Overheating protection shutdown (when the temperature detection point reaches the high temperature protection setting value, the power is turned off, the temperature drops, and it automatically recovers) 2. Automatic current limiting in high temperature environments (the power supply monitors the ambient temperature in real-time, and when the ambient temperature is too high, the output will automatically limit the current and reduce the output power) The ambient temperature is below 50°C , the temperature derating function will not be activated The ambient temperature is 50-60°C , and the output is automatically limited to 80% power The ambient temperature is 60-70°C , and the output is automatically limited to 50% power The ambient temperature exceeds 70°C and there is no output. When the temperature drops below 50°C degrees Celsius, it will automatically recover		
	Fan Failure Protection	The cooling fan does not rotate, or the fan is not detected ,The power supply has no output voltage		
	Input Undervoltage Protection	The input AC power supply voltage is lower than 96V, and the power supply has no output and cannot be used		
EMI	Conducted		CISPR32/EN55032 CLASS A	
	Radiated		CISPR32/EN55032 CLASS A	
	Harmonic Current		EN61000-3-2 CLASS A	
	Voltage Flicker		IEC/EN61000-3-3	
EMS	ESD		IEC/EN61000-4-2 Contact ±8KV/Air ±15KV	perf. Criteria A
	Radiated Susceptibility		IEC/EN61000-4-3 10V/m	perf. Criteria A
	EFT/Bures		IEC/EN61000-4-4 ±2KV	perf. Criteria A
	Surge		IEC/EN61000-4-5 line to line ±2KV/line to ground ±4KV	perf. Criteria A
	Conducted Susceptibility		IEC/EN61000-4-6 10Vr.m.s	perf. Criteria A
	Voltage Dips and Interruptions		IEC/EN61000-4-11 0%, 70%	perf. Criteria B
	1. The power supply should be considered as a part of the components within the electrical equipment, belonging to accessories, rather than an independent device 2. When conducting radiation testing, the test sample should be placed on a metal plate with a length of 80cm, width of 50cm, and thickness of 2mm for testing. The power supply should cooperate with the load equipment to conduct overall electromagnetic compatibility related tests. 3. When conducting conduction/radiation related tests, pure resistive loads should be used			
Insulation Impedance		I/P-O/P,I/P-FG,O/P-FG:100M Ohms /500VDC /25°C /70%RH		
Leakage Current		≤ 2.5MA/AC220V		
Withstand Voltage		Input and output: 2500VAC Input and ground: 1500VAC Between output end and housing: 500VAC		
SAFETY STANDARD		EN IEC 62368-1:2020+A11:2020		
Other	Heat Dissipation Mode	Fan heat dissipation (temperature controlled speed regulation, internal blowing)		
	Cooling Fan Noise Value	In an indoor environment of around 20-25 decibels, when the two fans rotate at full speed, a measurement of around 35 decibels is made at a distance of 1 meter from the power supply		
	Working Temperature	-30°C - 40°C . Overheating can cause a decrease in power, please refer to the temperature load reduction curve in the following text		
	Size	Length 268mm * Width 131mm * Height 41mm		
	Weight	1.4kg (excluding package and accessories)		
	Installation Hole Position	Length spacing: 260mm Width spacing: 120mm Use the installation holes at the four corners of the casing		
Tips	1. Pay attention to ventilation and heat dissipation during use. Do not install the power supply in a fully sealed box. The heat dissipation outlet of the power supply and the fan inlet cannot be blocked by objects. 2. This power supply is only for indoor use, not rainproof, not waterproof, not dustproof, not for outdoor use 3. When the altitude exceeds 2000 meters (6500 feet), the ambient temperature decreases proportionally every 5 °C /1000m. 4. Multiple power sources cannot be used in parallel			



- L** Live wire of AC input
- N** Zero line of AC input
- ⏏** Ground wire
- V-** Negative pole of DC output voltage
- V+** Positive pole of DC output voltage
- ADJV** Output voltage regulation
- ADJI** Output current regulation
-  485 communication and ps-on

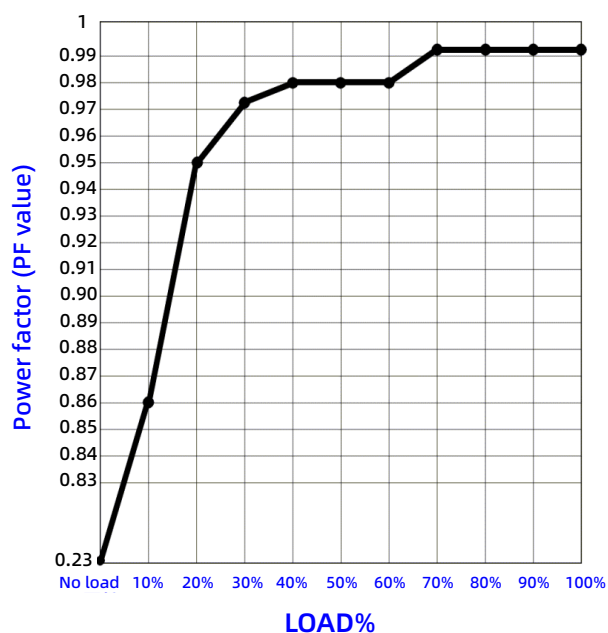


1	485-B	485 communication interface
2	485-A	
3	PS-ON	PS-ON open circuit: The power supply has voltage output
4		

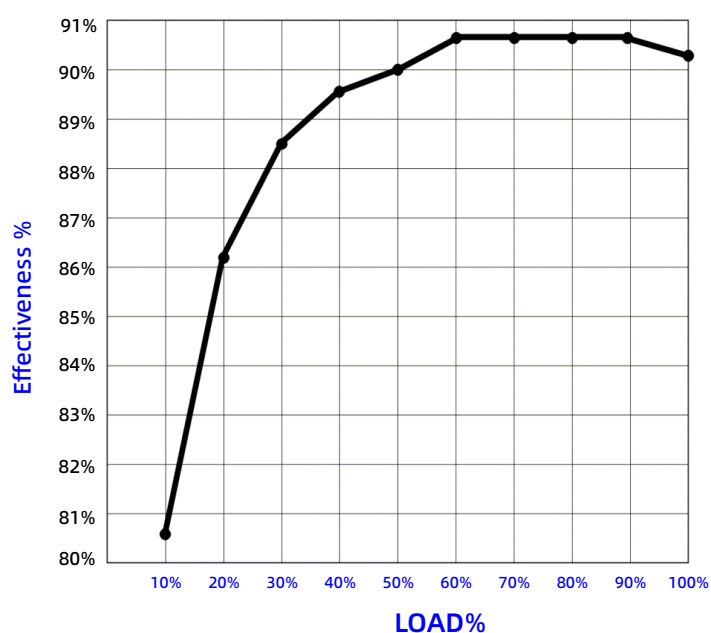


1	485-B	485 communication interface
2	485-A	
3	PS-ON	PS-ON short circuit: No voltage output from the power supply
4		

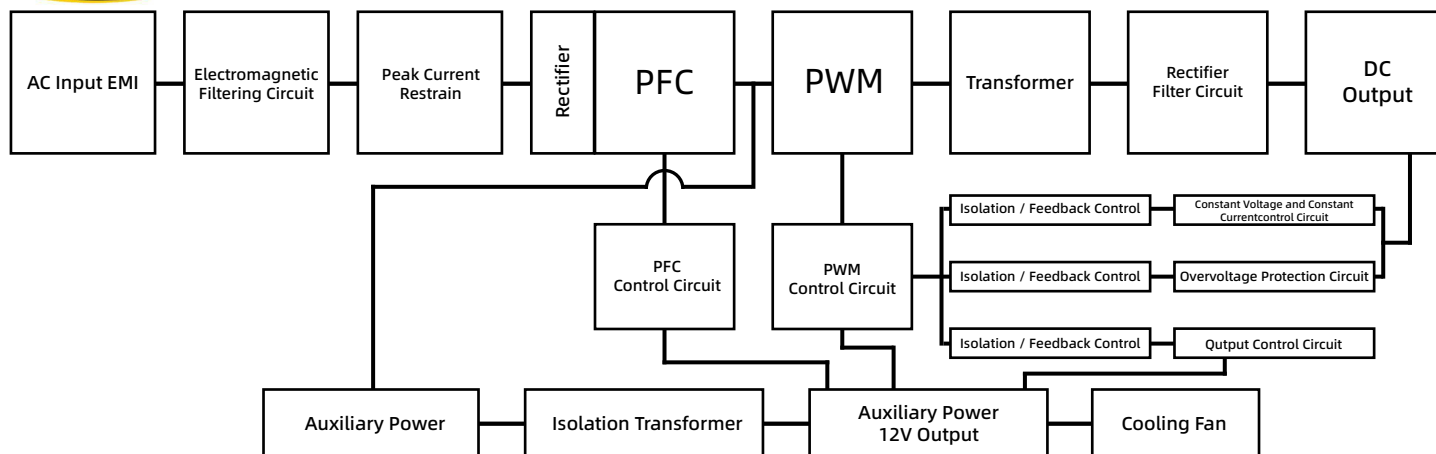
Power factor vs load



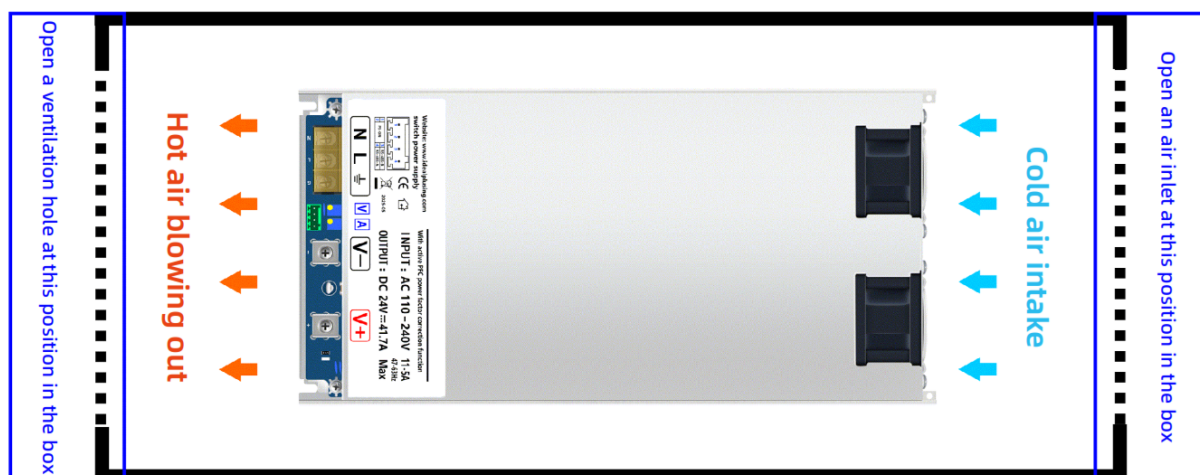
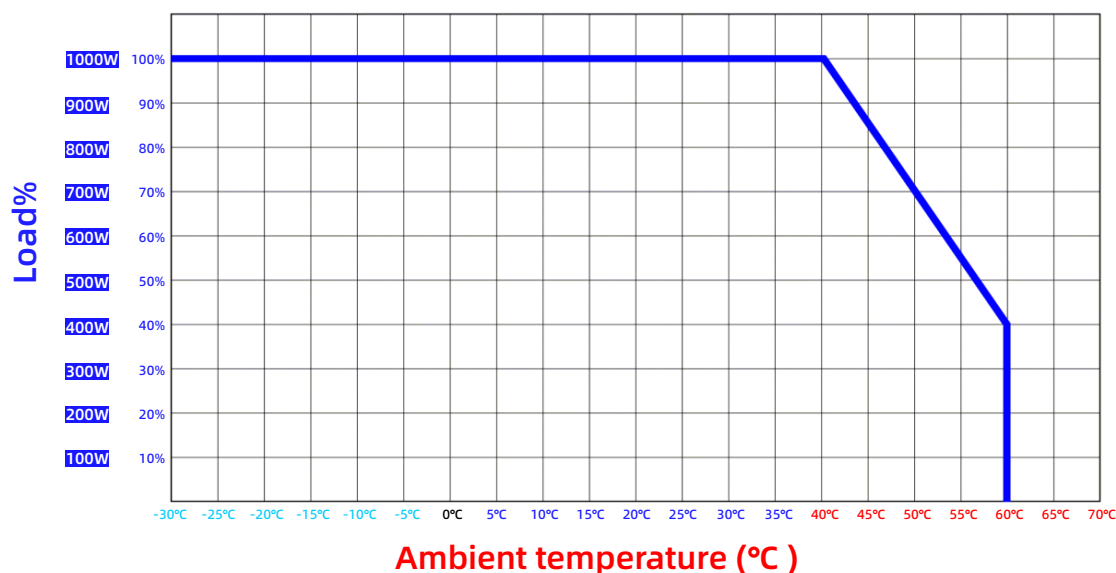
Efficiency vs Load (48V model)



The above parameters were measured at an AC 230V input voltage.



Environmental temperature power reduction curve



When installed inside the box, holes must be opened on both sides of the box (indicated by the dashed line in the figure) The fan inlet and hot air outlet of the power supply should not be obstructed and should form convection Using it inside a sealed box can result in inability to dissipate heat, causing high-temperature protection to shut down or malfunction

