

AC-PFC3000-xxx



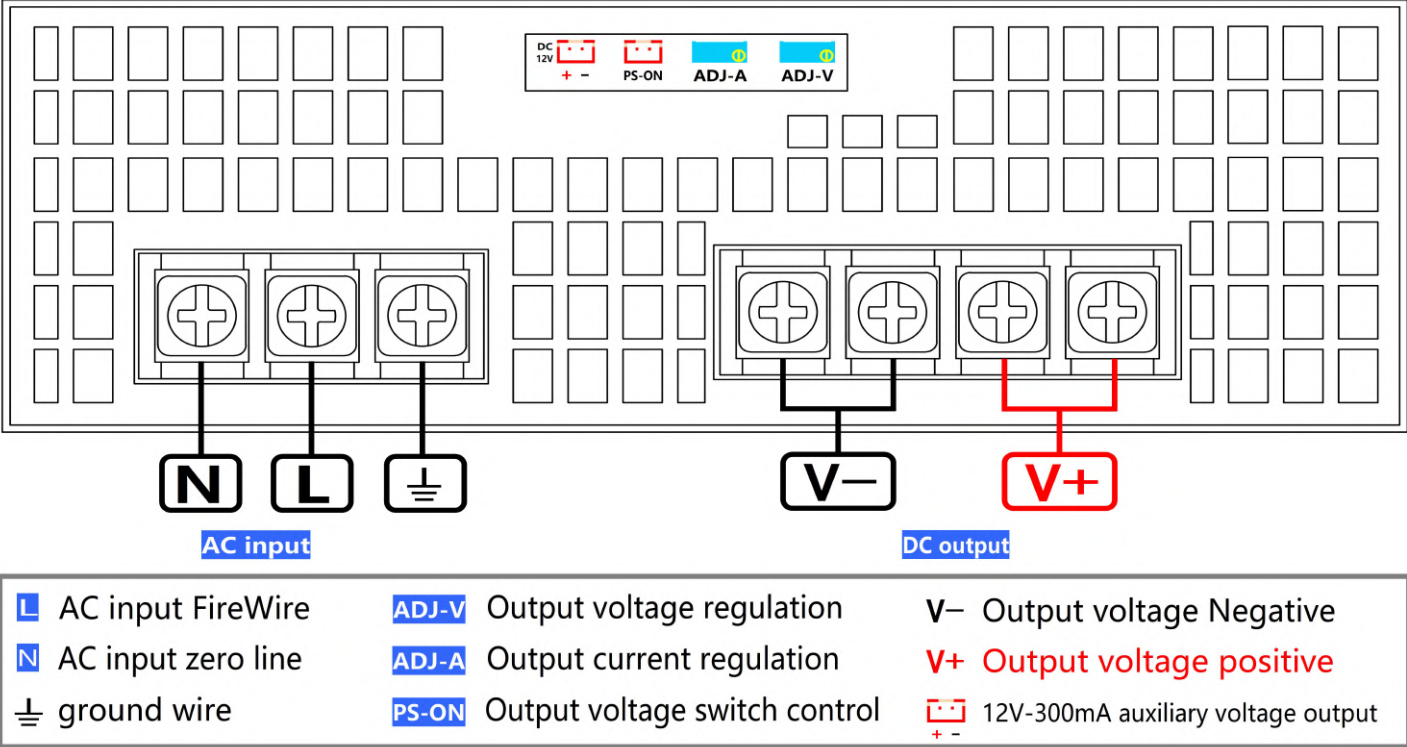
SCHMID-M

- Active PFC power factor correction function
- High PF value, low harmonics, high efficiency
- AC110-240V wide voltage input
- Multi-layer circuit board (4-layer line PCB board)
- Constant voltage constant current
- multiple voltage specifications optional

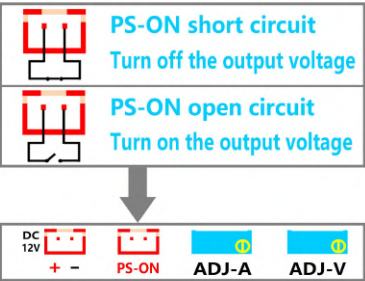
model		AC-PFC3000-160	AC-PFC3000-250	AC-PFC3000-300	AC-PFC3000-350	AC-PFC3000-400
Output parameter	DC output voltage	160V	250V	300V	350V	400V
	AC 220V input	Output current	18.7A	12A	10A	8.5A
		Output Power	3000W	3000W	3000W	3000W
		efficiency	93.3%	93.5%	93%	93%
	AC 110V input	Output current	15.6A	10A	8.3A	7.1A
		Output Power	2500W	2500W	2500W	2500W
		efficiency	90.3%	90.3%	90%	90%
	Tip: When using the AC110V input, Need to reduce the output power to 2500W					
	Ripple (max)	380mv	450mV	450mV	580mV	580mV
	Voltage regulation range	109-160V	165-250V	200-300V	235-350V	265-400V
	Linear adjustment rate	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	Load Regulation	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	Voltage accuracy	±2%	±2%	±2%	±2%	±2%
	Start / rise time	Power-on post-delay 3-4 second start/ 500MS voltage complete				
	Power-off keeping time	16ms(220VAC 80% load) 8ms(220VAC 100% load)				
	Output wiring method	3PIN KF78 spacing 14mm PCB fence type wiring terminal with protective cover				
topology	PFC	Interlaced Boost				
	PWM	Staggered parallel Two-transistor forward				
input parameter	input voltage	AC 110v-240v (wide voltage adaptive)				
	Frequency Range	47-63Hz				
	Input Current (Maximum value)	Full load 3000W output, use 220VAC input 16A Full load 2500W output, use 110VAC input 26A (When using 110V input, the maximum power is limited to 2500W)				
	Power during standby	15W				
	Power factor (PF value)	Use the AC220V input and power 100% full load,Power factor ≥ 0.96 (refer to PF value in the figure below) Use the AC110V input and power 100% full load,Power factor ≥ 0.97 (refer to PF value in the figure below)				
	Input Wiring method	3PIN KF78 spacing 14mm PCB fence type wiring terminal with protective cover				
	Enter a surge current	Cold start 220VAC/53A 110VAC/28A				
function	PS-ON	PS-ONTerminal short circuit: power off output voltage PS-ONTerminal open: turn on the output voltage (Default is open) Note: The PS-ON function controls the output voltage on the power supply to turn off. When the output voltage is turned off, the power is in low power standby state (standby power 10 watts), only the auxiliary power supply circuit is working, the heat dissipation fan is working properly. It is not disconnected from the 220V input.				
	Output voltage regulation	Output voltage adjustable, Adj-V potentiometer manually adjustment)				
	Output current adjustment	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)				
	Auxiliary voltage output	This machine provides a 12V-300mA auxiliary voltage output				

Protective function	Output overvoltage protection	120% of the maximum output voltage cut off, does not automatically recover, to re-power it will recover
	Output short circuit protection	There is no output after the output is shorted, and the output voltage is automatically restored after short circuit release.
	Output overload protection	The overload protection mode is constant current limit mode, the lock output current value is unchanged, and the output voltage is increased and decreases with the load.
	Overheating protection	When the heat sink temperature of the PWM transistor reaches $85^{\circ}\text{C} \pm 5\%$, the output voltage is turned off. Automatic recovery when the temperature drops to $75^{\circ}\text{C} \pm 5\%$
Safety and EMC standard	EMC standard	Does not conform to EMC standards
	Insulation resistance	I/P-O/P,I/P-FG,0/P-FG:100M Ohms /500VDC /25°C/70%RH
	Leakage current	$\leq 2\text{MA}/\text{AC}220\text{V}$
	Withstand voltage	Input and output :3000VAC Input and ground :1500VAC Output end and housing:500VAC
environment	Operating temperature	-30-40 ° C can be used in 100% full power, more than this temperature range to reduce the output power (refer to the temperature drop curve below)
	Storage temperature, humidity	-40~+55°C, 20-90%RH
	Altitude	Only used in 2500m altitude
other	Cooling method	Built in cooling fan (temperature control speed, 2 fans) to blow air internally
	Fan noise value	In a quiet indoor environment of 20-30 dB, when the fan rotates at the highest speed, the measured value at 1 meter from the power supply is 55 dB
	Shell size	294mm long (45mm extension outside the terminal) * Width 185mm * height 65mm
	Install fixing hole	(Horizontal installation) length spacing: 236mm width spacing: 205mm (reference dimension)
	weight	Weight 3.3kg
Warning	1. Pay attention to ventilation and heat, can not be installed inside the full sealed box 2. This power supply is limited to indoor use, no rain, no waterproof, no dust, not suitable for outdoor environment and harsh environments	

Front panel introduction



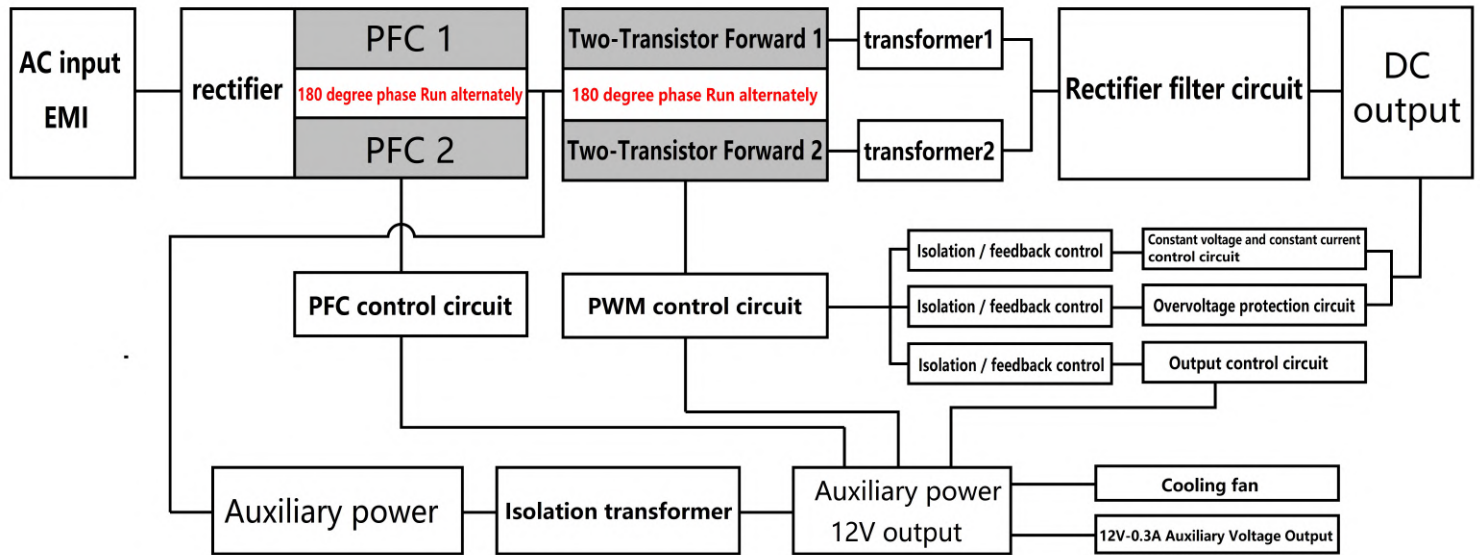
PS-ON operation method



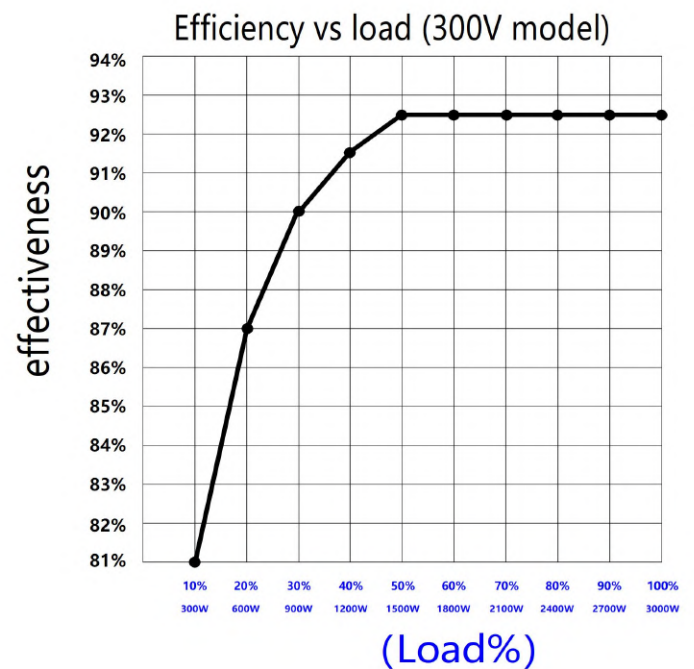
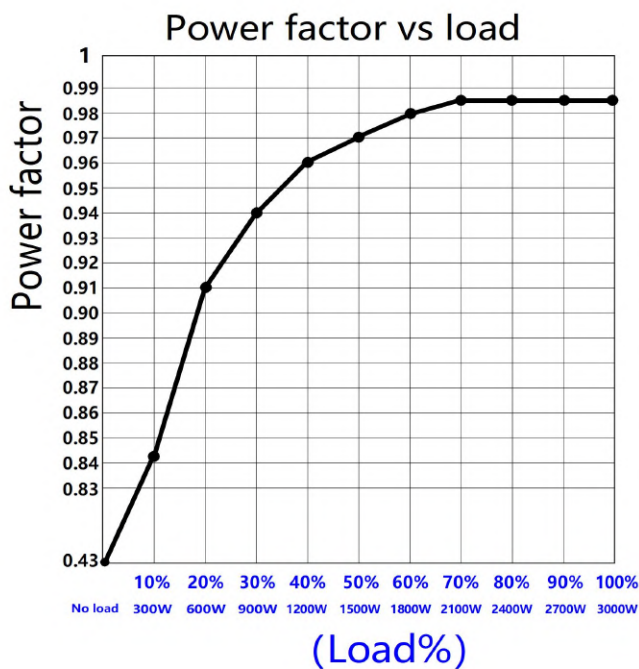
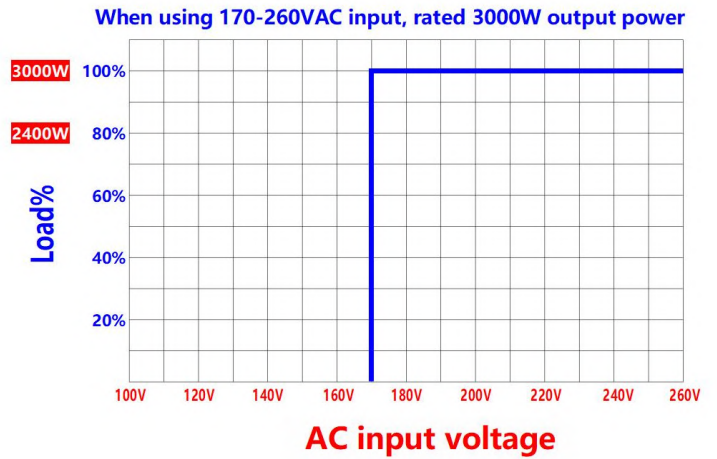
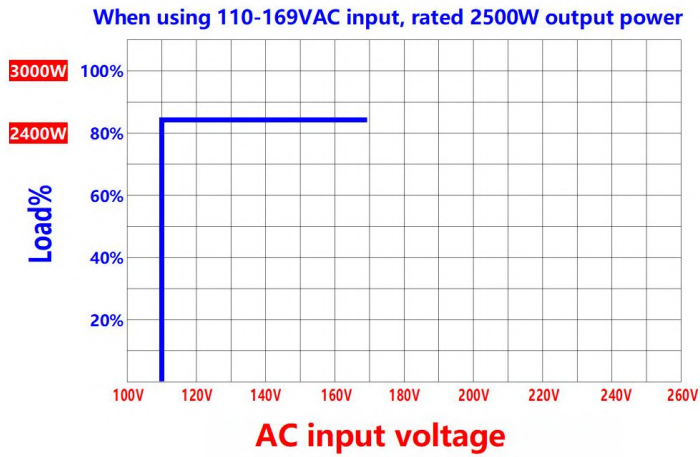
Note: this function can control the output voltage Opening and closing

- Principle: turn off the PWM square wave of the control chip to turn off the output voltage (the control circuit is isolated)
1. This function does not disconnect the power supply of AC220V input terminal
 2. When the output voltage is turned off, the internal auxiliary power supply circuit and PFC circuit are still working (the cooling fan operates normally)
 3. During use, the power supply of AC input terminal cannot be switched on and off frequently which is easy to cause power damage

Block diagram

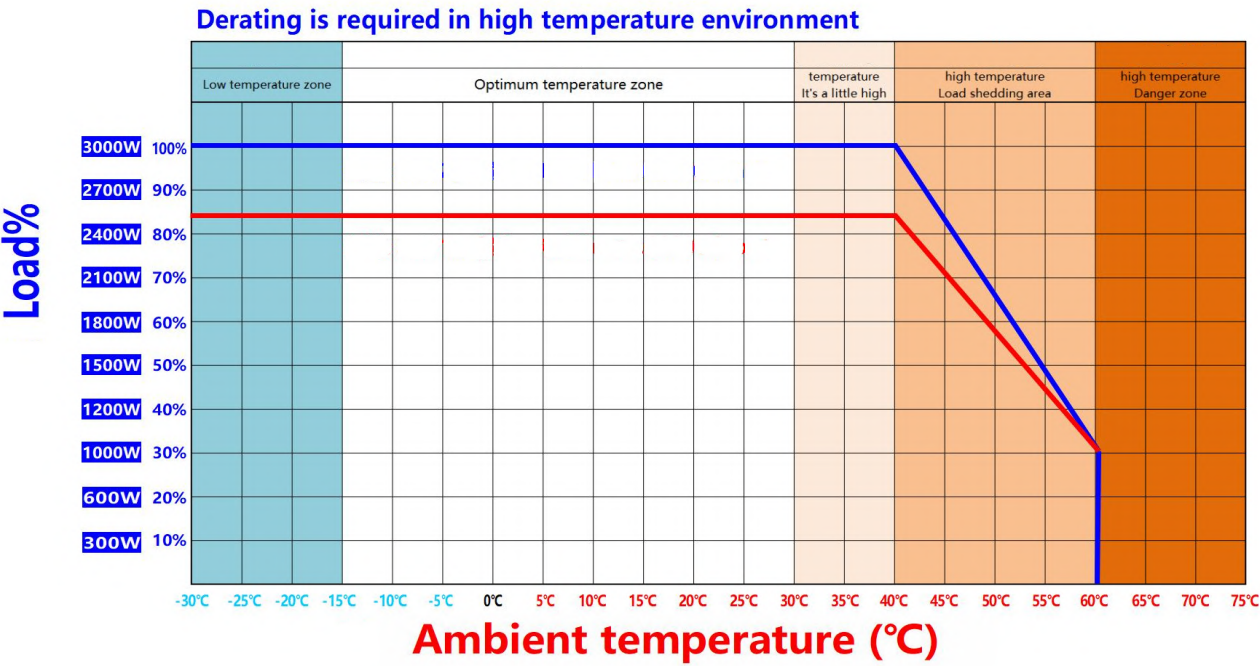


Performance curve



The above parameters are measured at AC230V input voltage

Temperature drop curve



Case dimension diagram

