■ 特性 Features:

- 全电压范围输入：90-264Vac/127-370Vdc
  Full range AC input voltage: 90-264Vac/127-370Vdc
- 半灌胶设计
  Semi-Potted Design
- 内置主动式 PFC 功能
  Built-in active PFC function
- 工作温度高达 70℃
  Operating temperature up to 70℃
- 效率高达 95%
  Efficiency up to 95%
- 输出低纹波噪声
  Low ripple & noise output
- 电源输出 LED 指示灯
  PSU output LED indicator
- 输出电压可调
  The output voltage value are adjust
- 自然风冷散热
  Cooling by free air convection
- 输出短路、过流、过压、过温保护功能
  With OSP、OCP、OVP、OTP functions
- 满足 5000M 海拔应用(备注 3)
  Meet 5000M altitude application (Note 3)
- 符合 IEC/EN/UL62368、GB4943、GB9254 等认证标准
  Comply with IEC/EN/UL62368, GB4943, GB9254 and EN62477 Etc.certification standards
- 高可靠性
  High reliability
- 细长超薄型
  Slender and ultra-thin type
- DC OK 有效信号和冗余功能(可选)
  DC OK Effective signal and redundant function (optional)

■ 应用 Applications:

- 工业控制或自动化装置
  Industrial control or automation devices
- 电子仪器，设备和装置
  Electronic instruments, equipment and devices
- 机械和电气设备
  Mechanical and electrical equipment
- 老化设备
  Burn-in equipment

■ 描述 Description:

NHP500SW 系列是一款 500W 单组输出 AC 转 DC 电源，100-240V 交流输入，整系列提供 4.2V,5V,12V, 15V, 24V, 36V, 48V 和 55V 直流隔离输出。半灌胶设计,自然风冷散热，工作温度可达 70℃。含有多种功能如输出电压电流可调。具有完整的保护功能，EMC 性能好，高可靠性，安全隔离等优点。产品符合 IEC/UL/EN/BS EN62368、EN61558、GB4943、BIS IS13252、EN62477 等国际安全法规，符合欧盟 RoHS2.0 指令，是一款高性能的工业电源。

NHP500SW series is a 500W single output AC to DC PSU, 100--240Vac input, The whole series provides 4.2V,5V,12V,15V,24V,36V,48V and 55V DC isolated output.Semi-Potted Design,Cooling by free air convection, working temperature up to 70℃.Contains a variety of functions such as output voltage and current adjustable.With complete protection function,Excellent EMC performance, high reliability, security isolation and so on. Products comply with IEC/UL/EN/BS EN62368、EN61558、GB4943、BIS IS13252、EN62477 international safety standards and EU RoHS2.0 directive; It is a high performance industrial PSU.

选型规格 Model Selection

功率段 POWER	产品型号 MODEL	输出功率 Pout	输入电压 Vin	输出电压 Vout	输出电流 Iout	效率(%) EFF.	安规认证 SAFETY
500W	GW-NHP500SW-4.2	336W	90-264Vac/ 127-370Vdc	4.2V	80A	89.0	CCC,CE
	GW-NHP500SW-5	400W		5V	80A	90.0	
	GW-NHP500SW-12	500.4W		12V	41.7A	94.0	
	GW-NHP500SW-15	501W		15V	33.4A	94.0	
	GW-NHP500SW-24	501.6W		24V	20.9A	95	
	GW-NHP500SW-36	500.4W		36V	13.9A	95.5	
	GW-NHP500SW-48	501.6W		48V	10.45A	95.5	
	GW-NHP500SW-55	500W		55V	8.9A	95.0	

*其它安规需求认证中 Other safety requirements are pending certification.

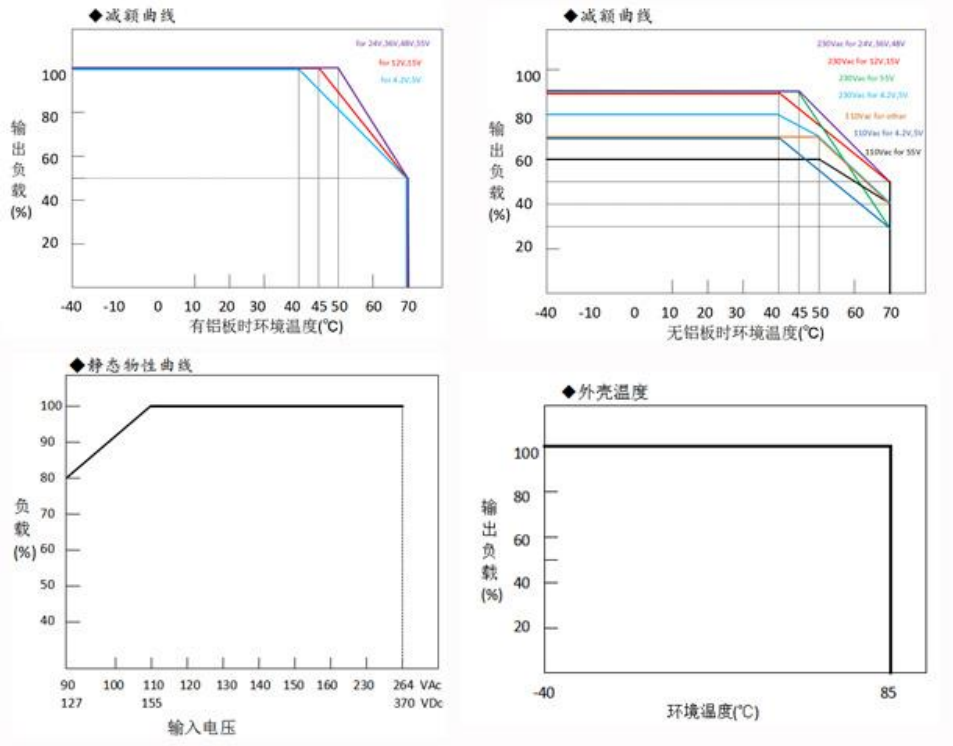
通用参数 General Specification

型号 MODEL		GW-NHP500 SW-4.2	GW-NHP500 SW-5	GW-NHP500 SW-12	GW-NHP500 SW-15	GW-NHP500 SW-24	GW-NHP500 SW-36	GW-NHP500 SW-48	GW-NHP500 SW-55
输出 Output	输出电压 Output Voltage	4.2V	5V	12V	15V	24V	36V	48V	55V
	额定电流 Output Current	80A	80A	41.7A	33.4A	20.9A	13.9A	10.45A	8.9A
	电流范围 Current Range	0~80A	0~80A	0~41.7A	0~33.4A	0~20.9A	0~13.9A	0~10.45A	0~8.9A
	额定功率 Output Power	336W	400W	500.4W	501W	501.6W	500.4W	501.6W	500W
	纹波与噪声 Ripple and Noise(备注6)	200mV	200mV	200mV	200mV	240mV	360mV	360mV	500mv

	电压调整范围 Adj-voltage range	3.6~4.4V	4.5~5.5V	11.4~12.6V	14.3~15.8V	22.8~25.2V	34.2~37.8V	45.6~50.4V	45~58V
	稳压精度 Voltage stability(备注2)	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	线性调整率 Line regulation	±0.5%	±0.5%	±0.3%	±0.3%	±0.3%	±0.3%	±0.3%	±0.3%
	负载调整率 Load regulation	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	保持时间 Hold-up time	12ms (230Vac/100% load)，12ms (115Vac/100% load)							
	启动时间 Startup time	≤1s （115Vac /230Vac ； 100% load)							
输入 Input	电压范围 Voltage Range	90~264Vac							
	频率范围 Frequency Range	47~63Hz							
	输入电流 Input Current	4.85A / 100Vac，2.6A / 240Vac							
	功率因数 PF	PF>0.95/230VAC PF>0.99/115VAC(100% load)							
	浪涌电流 Inrush Current	30A / 115Vac，60A / 230Vac，Cold start							
	效率 Efficiency	89.0%	90.0%	94.0%	94.0%	95%	95.5%	95.5%	95.0%
保护 Protections	过电压 OVP	4.62~5.46V	5.75~6.75V	13.2~15.6V	16.5~19.5V	26.4~31.2V	39.6~46.8V	52.8~62.4V	60~69V
		关断输出电压,重启恢复 Shut off the output voltage,The PSU can be recovered after restarted							
	过负载 OCP	110~140%	110~140%	110~140%	110~140%	110~140%	110~140%	110~140%	110~140%
		打嗝模式，异常条件移除后可自动恢复 Hiccup mode, The PSU can be Auto-recovered when the fault is removed							
	过温度 OTP	打嗝模式，异常条件移除后可自动恢复 Hiccup mode, The PSU can be Auto-recovered when the fault is removed							
	短路 OSP	打嗝模式，异常条件移除后可自动恢复 Hiccup mode, The PSU can be Auto-recovered when the fault is removed							
环境 Environmental	工作温度 Operating Temperature	-30～+70℃ 请参考降额曲线 Refer to the derating curve							
	工作湿度 Operating Humidity	20%～90% RH，无冷凝 Non-condensing							
	存储温度 Storage	-40～+85℃							

	Temperature	
	存储湿度 Storage humidity	10%～95% RH，无冷凝 Non-condensing
安规 Safety	安全规范 safety standards	IEC/UL/EN/BS EN62368、EN61558、GB4943、BIS IS13252、EN62477
	耐压 Hi-pot	I/P - O/P：3000Vac/4242Vdc，I/P - FG：2000Vac/2828Vdc，O/P - FG：500Vac/707Vdc
	绝缘阻抗 Insulating resistance	≥10Mohm (500VDC / 25℃ / 90% RH)
	漏电流 Leakage Current	<0.75mA / 240VAC
	静电放电 ESD	IEC/EN61000-4-2，CLASS B；Contact1±8KV / Air ±15KV ;
	电磁兼容 EMC	CISPR32 / EN55032，CLASS B
其它 Others	固保期 Warranty	3Years
	MTBF	Telcordia SR-332 (Bellcore) ≥500K hrs
	尺寸 SIZE	232mm * 80mm * 31mm (L * W * H)
	包装 Packing	0.9KG；8PCS/Box
备注 Remark	1. 如未特别说明，所有规格参数均在输入为 230Vac，额定负载，25℃环境温度下进行测量，详见测试报告。 Unless otherwise specified,all spec.are measured at 230Vac,rated load, Ta=25℃, Please refer to the test report. 2. 输出电压的精度包含设定误差、线性调整率和负载调整率。 The voltage stability includes setting error,linear regulation and load regulation 3. 当产品工作于海拔 2000m 以上时，环境温度需降额 5℃/1000m。 When the power supply is working above an altitude of 2000m, the Ta must be derated by 5℃/1000m 4. 低电压输入情况下需减额输出，具体请参照输出减额曲线图。 In the case of low voltage input, the output must be derated. For details, see the output derated curve. 5. 在轻载或空载条件下,PV 电压由高压至低压调整有可能会触发 OVP 保护。建议在这种情形下调整 PV 时必须先关机，再由最低电压向上调整至需求电压。 Under light load or no-load conditions, the PV voltage adjustment from high to low voltage may trigger OVP protection. It is recommended that when adjusting PV in this case, you must turn off the PSU first, and then adjust the minimum voltage upward to the required voltage.. 6. 纹波和噪声的测试方法采用双绞线连接，输出并联 47uF 低 ESR 电容和 0.1uF 陶瓷电容，在 20MHz 带宽下进行量测。 The test method of ripple and noise is connected by twisted pair, the output is in parallel with 47uF low ESR capacitor and 0.1uF ceramic capacitor, and the measurement is carried out at 20MHz bandwidth. *产品免责声明:产品最终解释权归长城电源技术有限公司所有 详细请参阅网址 https://www.gwpst.com *Disclaimer: The final interpretation rights of the product belong to Great Wall Power Supply Technology Co., Ltd. Details please refer to https://www.gwpst.com	

■ 降额曲线 Derating Curve



■ 功能手册 Function Manual

1.DC_OK 信号

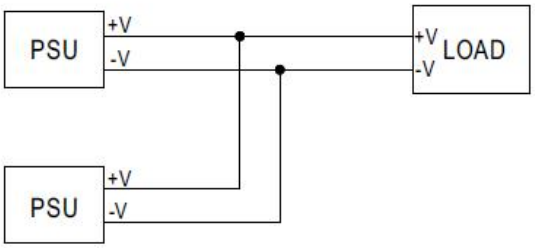
DC_OK 是一个集电极短路信号,它在电源内部使用一个光耦合器，用来指示电源的输出状态，如下示意图

触点关断	电源开启/DC正常
触点开启	电源关断/DC故障
触点容量(最大)	30Vdc/1A阻性负载

2.冗余功能

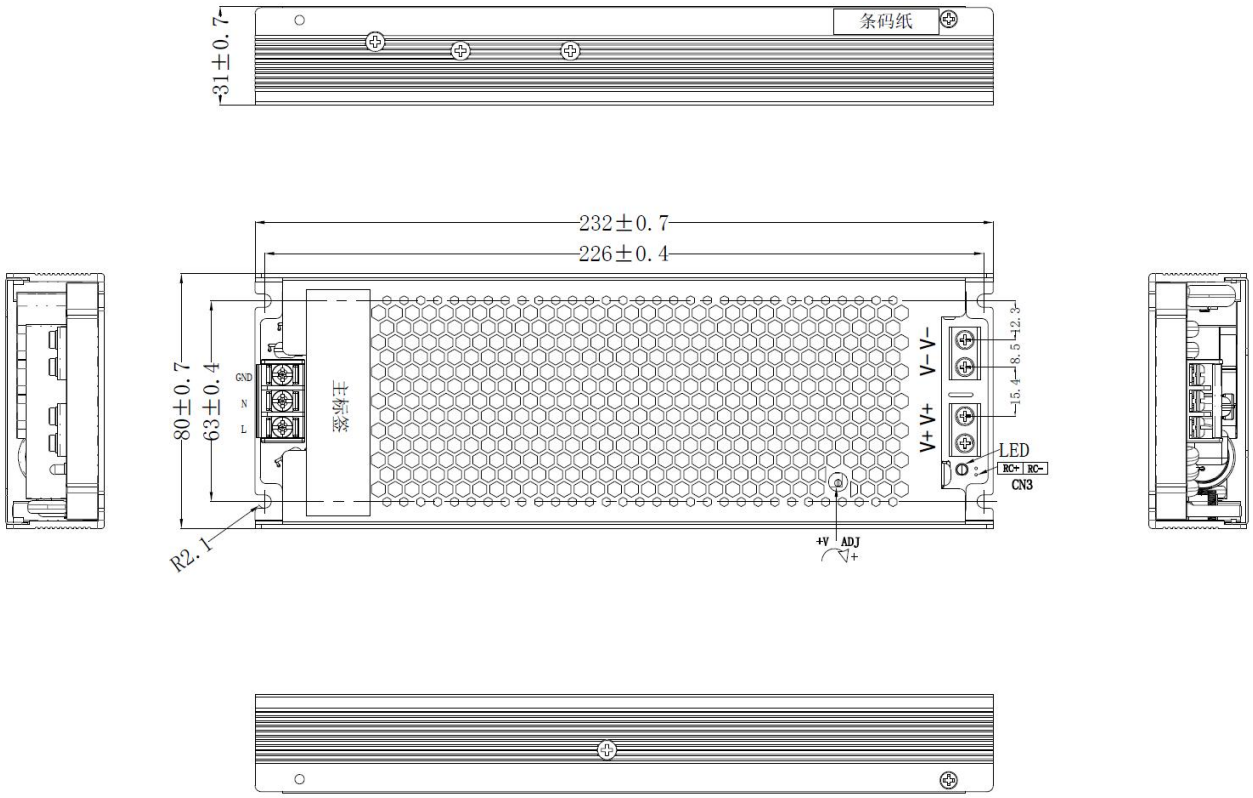
(1) NHP-500SW 内建冗余功能，能够并联两台使用

(2) 当并联使用时，最大使用负载不能超过任意一台电源的额定负载

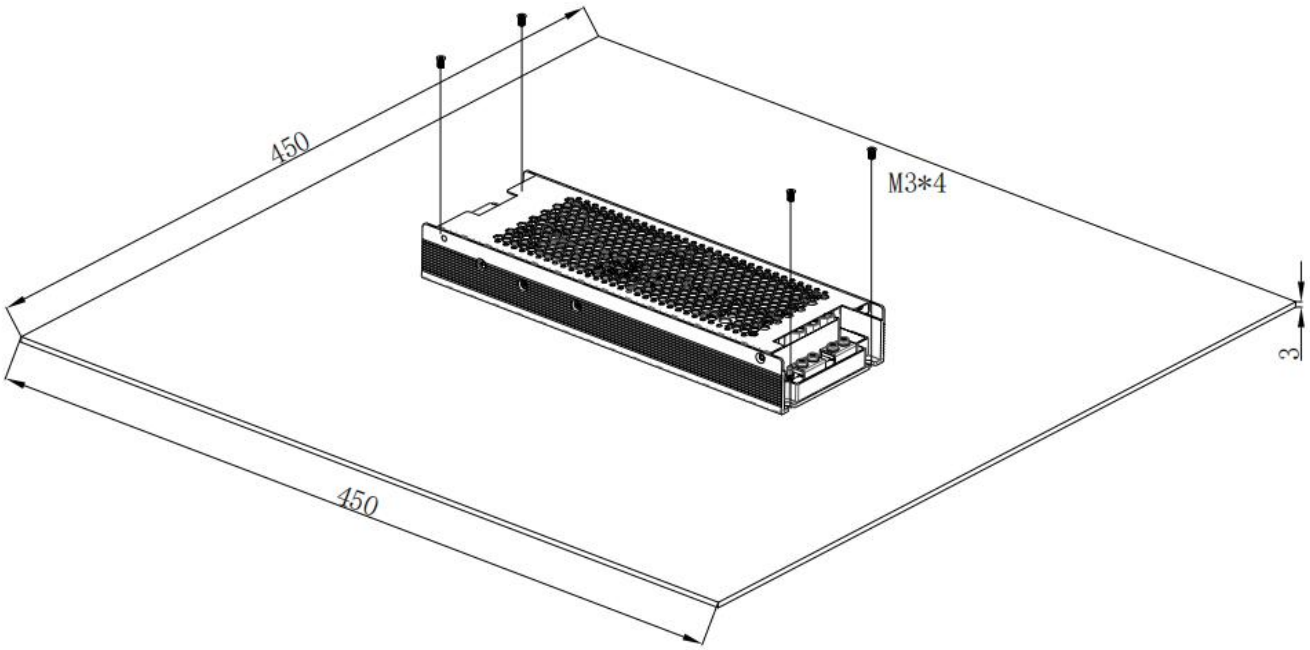


结构参数 Mechanical Overview

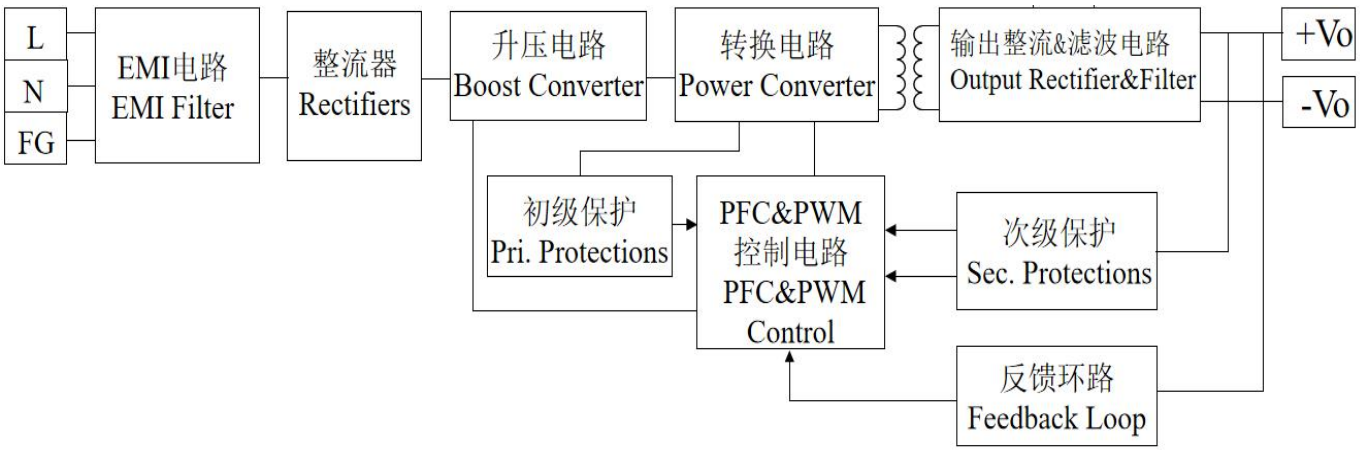
■ 结构尺寸 Shape Size



■ 安装示意图



■ 方框图 Block Diagram



* 安装手册请查阅网址：https://www.gwpst.com

* Installation manual, please refer to web.: https://www.gwpst.com