■ 特性 Features:

- 全电压范围输入：90-200Vac(50% load),200~264Vac(100% load)
- Full range AC input voltage: 90-200Vac(50% load),200~264Vac(100% load)
- 半灌胶防雨设计
  Semi-Potted Rainproof Design
- 内置主动式 PFC 功能，PF>0.99
  Built-in active PFC function，PF>0.99
- 输出低纹波噪声
  Low ripple & noise output
- 电源输出 LED 指示灯
  PSU output LED indicator
- 输出电压值可调
  The output voltage are adjustable
- 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)
- 100%高温老化
  100% high temperature burn-in test
- 符合 IEC/EN/UL62368、GB4943、GB4208 和 EN62477 等认证标准
  Comply with IEC/EN/UL62368、GB4943、GB4208 and EN62477 Etc.certification standards
- 满足 3G 振动测试
  Meet 3G vibration test
- 高效率，高可靠性。
  High efficiency and reliability
- 固保期：3 年
  Warranty：3Years



■ 应用 Applications:

- 工业控制或自动化装置
  Industrial control or automation devices
- LED 照明设备
  LED lighting equipment
- 机械和电气设备
  Mechanical and electrical equipment
- 老化设备
  Burn-in equipment

■ 描述 Description:

NHP400W 系列是一款 400W 单组输出 AC 转 DC 电源，90-264V 交流输入，整系列提供 12V，24V 和 48V 直流隔离输出；1U 外型设计，具有完整的保护功能，灌半胶防雨设计，EMC 性能好，高可靠性，安全隔离等优点。产品符合 IEC/EN/UL/BS EN62368、EN61558、GB4943、EN62477 等国际安全法规，符合欧盟 RoHS2.0 指令，是一款极具性价比的工业电源。

NHP400W series is a 400W single output AC to DC PSU, 90--264Vac input, The whole series provides 12V, 24V and 48V DC isolated output; 1U external design, With complete protection function, The design of partial potting rainproof, excellent EMC performance, high reliability, security isolation and so on. Products comply with IEC/EN/UL/BS EN62368、EN61558、GB4943、EN62477 international safety standards and EU RoHS2.0 directive; It is a cost-effective 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
400W	GW-NHP400W-12	360W	90~200Vac（50% load） 200~264Vac（100% load）	12V	30A	91.0	CCC,CE
	GW-NHP400W-24	400.8W		24V	16.7A	92.8	
	GW-NHP400W-48	398.4W		48V	8.3A	93.0	

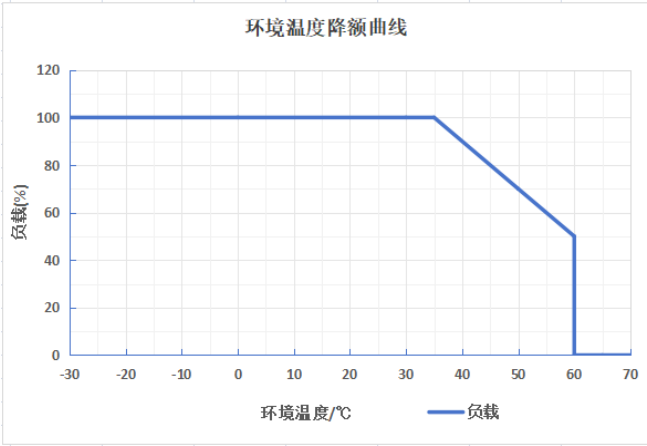
*其它安规需求认证中 Other safety requirements are pending certification.

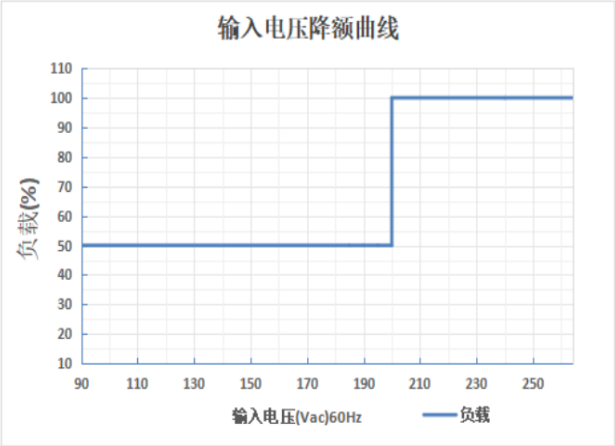
通用参数 General Specification

型号 MODEL		NHP400W-12	NHP400W-24	NHP400W-48
输出 Output	输出电压 Output Voltage	12V	24V	48V
	额定电流 Output Current	30A	16.7A	8.3A
	电流范围 Current Range	0~30A	0~16.7A	0~8.3A
	额定功率 Output Power	360W	400.8W	398.4W
	纹波与噪声 Ripple and Noise(备注 6)	150mV	150mV	150mV
	电压调整范围 Adj-voltage range	10.8~13.2V	21.6~26.4V	43.2~52.8V
	稳压精度 Voltage stability(备注 2)	±1.0%	±1.0%	±1.0%
	线性调整率 Line regulation	±0.5%	±0.5%	±0.5%
	负载调整率 Load regulation	±0.5%	±0.5%	±0.5%
	保持时间 Hold-up time	10ms (230Vac/100% load，115Vac/50% load)		
	启动时间 Startup time	≤3000ms （115Vac /50% load)；≤2000ms （230Vac /100% load)		
输入 Input	电压范围 Voltage Range	90~200Vac（50% load） 200~264Vac（100% load）		
	频率范围 Frequency Range	47~63Hz		
	输入电流 Input Current	3A /115VAC；2.5A/230VAC		
	功率因数 PF	PF>0.97/230VAC(100% load)；PF>0.99/115VAC(50% load)		
	浪涌电流 Inrush Current	65A/115VAC；130A/230VAC，Cold start-up		
	效率 Efficiency（TYP.）	91.0%	92.80%	93.0%

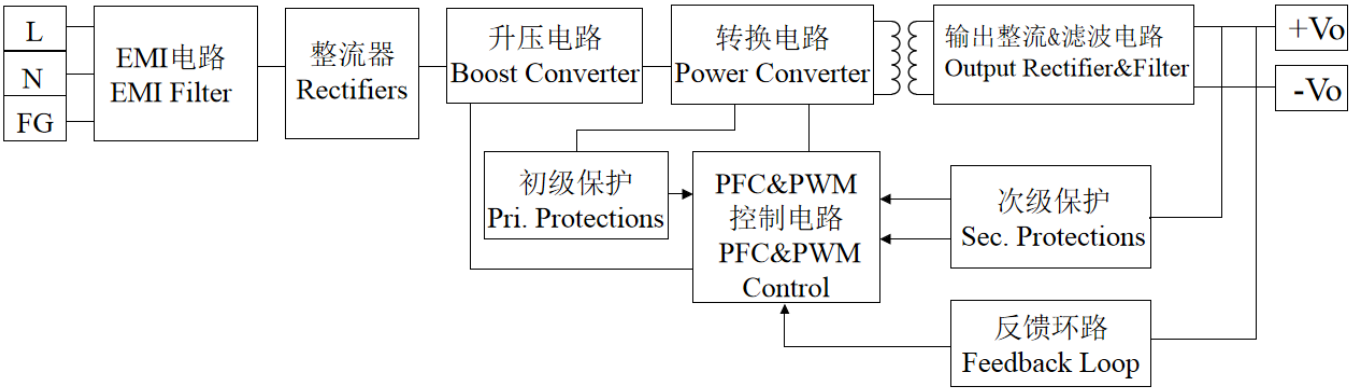
保护 Protections	过电压 OVP	13.8~16.2V	27.6~32.4V	55.2~64.8V
	过负载 OCP	105~150%	105~150%	105~150%
	过温度 OTP	自锁模式，异常条件移除后可自动恢复 Latch-mode, The PSU can be Auto-recovered when the fault is removed		
	短路 OSP	自锁模式，异常条件移除后可自动恢复 Latch-mode, The PSU can be Auto-recovered when the fault is removed		
环境 Environmental	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 Temperature	-40～+85℃		
	存储湿度 Storage humidity	10%～95% RH，无冷凝 Non-condensing		
安规 Safety	安全规范 safety standards	IEC/EN/UL62368、GB4943、GB9254、CCC、CE		
	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	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH		
	静电放电 ESD	IEC / EN 61000-4-2 Contact ±8KV / Air ±15KV perf. Criteria A		
	电磁兼容 EMC	CISPR32 / EN55032，CLASS A		
其它 Others	固保期 Warranty	3Years		
	MTBF	Telcordia SR-332 (Bellcore) ≥500K hrs		
	尺寸 SIZE	200mm * 120mm * 40mm (L * W * H)		
	包装 Packing	1.1Kg; 10PCS/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。 Derated output is required for low voltage, see the derating curve for details. 5. 在调节输出电压的情况下，输出电压超过额定输出电压时总功率不得超过 400W，输出电压低于额定输出电压时电流不能超过额定输出电流。 When adjusting the output voltage, if the output voltage exceeds the limit, the total power should not exceed 400W , and if the output voltage is lower than the rated output voltage, the current should not exceed the rated output current. 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 47 uF low ESR capacitor and 0.1uF ceramic capacitor, and the measurement is carried out at 20MHz bandwidth. *产品免责声明：详细请参阅网址 https://www.gwpst.cn Disclaimer: Details please refer to https://www.gwpst.com			

■ 降额曲线 Derating Curve



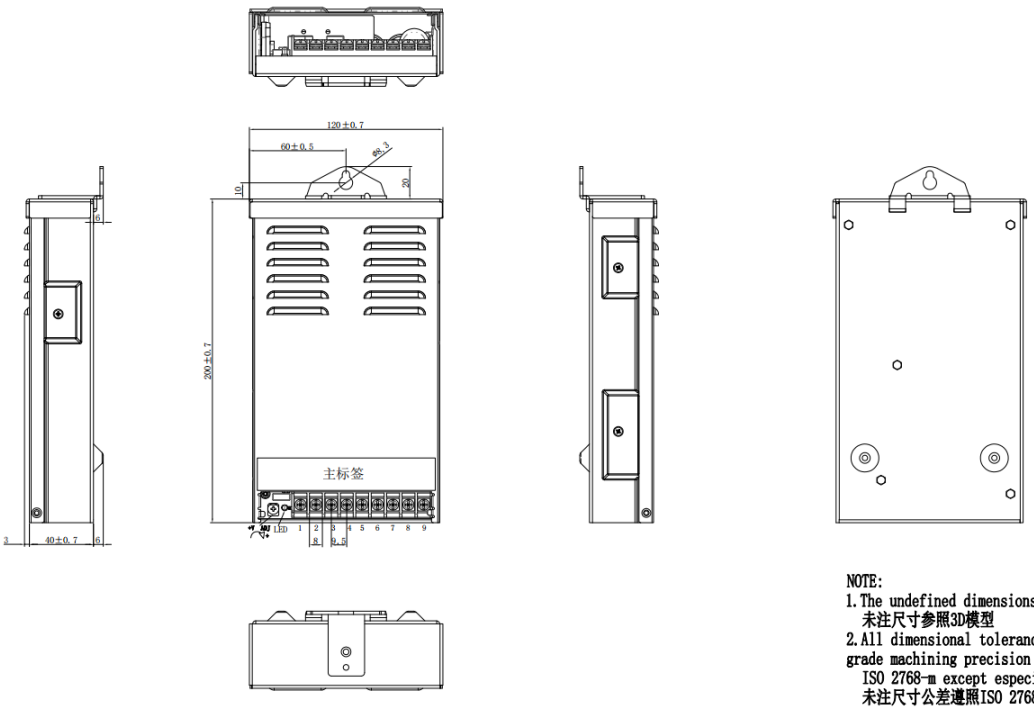


■ 方框图 Block Diagram



结构参数 Mechanical Overview

■ 结构尺寸 Shape Size



NOTE:
1. The undefined dimensions refer to the3D model.
   未注尺寸参照3D模型
2. All dimensional tolerance refers to general tolerance grade machining precision of
   ISO 2768-m except especial declaration.
   未注尺寸公差遵照ISO 2768-m 一般等级的精度要求.

端子引脚描述 Terminal PIN Description

引脚编号 Pin number	1~3	4~6	7	8	9
引脚功能 Pin Feature	Vout -	Vout +	FG	AC/N	AC/L

* 安装手册请查阅网址：https://www.gwpst.cn
Installation manual, please refer to web.: https://www.gwpst.com