

■ 特性 Features:

- 可通过开关选择输入电压范围: 90-132Vac/180-264Vac/250-370Vdc
The input voltage range can be selected through the switch: 90-132Vac/180-264Vac/250-370Vdc
- 两倍峰值功率
Peak Power up to 200%
- 工作温度高达 70℃
Operating temperature up to 70℃
- 4242Vdc 高隔离电压
4242Vdc high isolation voltage
- 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 is adjustable
- 内置直流风扇强制风冷
Built-in DC fan forced air cooling
- 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
- 满足 5G 振动测试
Meet 5G vibration test
- 符合 IEC/EN/UL62368、GB4943、GB9254 等认证标准
Comply with IEC/EN/UL62368, GB4943, GB9254 and EN62477 Etc.certification standards
- 输出双重过压保护 (可选)
Output double OVP (optional)
- 高可靠性, 基板三防漆工艺
High reliability, conformal coating process for substrates(optional)
- 固保期: 3 年
Warranty: 3 Years



■ 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:

ERS450CW-P2 系列是一款 450W 单组输出 AC 转 DC 电源,采用 115VAC 或 230VAC 输入(通过开关选择), 整系列提供 12V, 24V 和 48V 直流隔离输出; 35mm 极薄外型设计, 具有完整的保护功能, EMC 性能好, 高可靠性, 高性价比, 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, 是一款极具性价比的工业电源。此外, ERS450CW-P2 系列可为启动期间需要更高功率的马达应用和机电负载提供 200% 瞬间峰值功率。

ERS450CW-P2 series is a 450W single output AC to DC PSU, Adopting the input of 115VAC or 230VAC (select by switch), The whole series provides 12V, 24V and 48V DC isolated output; Advantages such as 35mm extremely thin design; With complete protection function; Excellent EMC performance, high reliability, high cost performance, 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 cost-effective industrial PSU. ERS450W-P2 Can provide 200% Peak Power for motor applications and electromechanical loads that require higher power during start-up.

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
450W	GW-ERS450CW-12P2	450W	90-132Vac/	12V	37.5A	88.5%	CQC/UL/CB
	GW-ERS450CW-24P2	451.2W	180-264Vac/	24V	18.8A	89%	
	GW-ERS450CW-48P2	451.2W	250-370Vdc	48V	9.4A	90%	

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

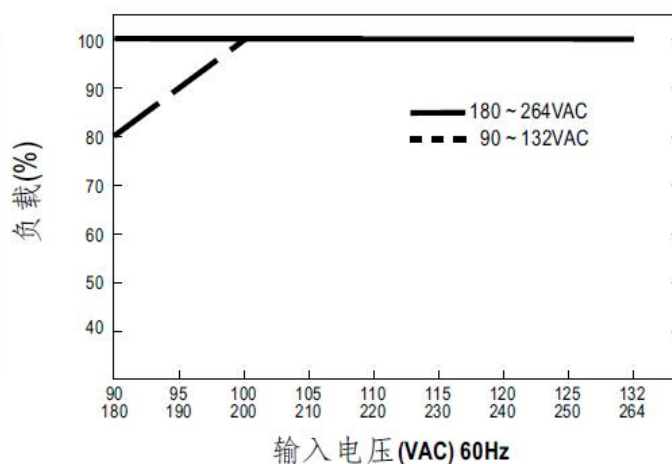
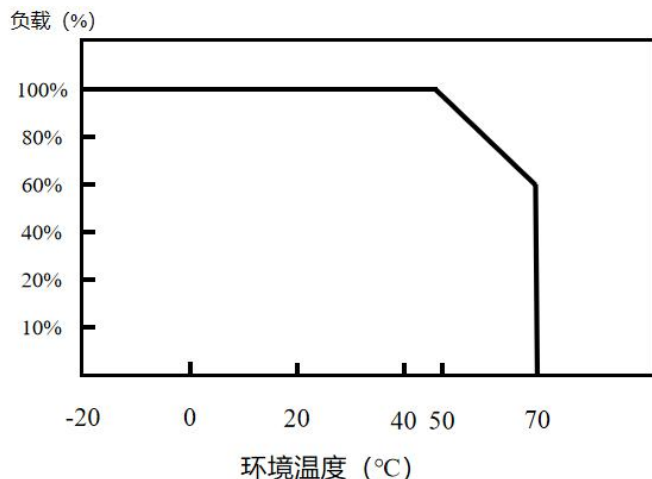
通用参数 General Specification

型号 MODEL		ERS450CW-12P2	ERS450CW-24P2	ERS450CW-48P2
输出 Output	输出电压 Output Voltage	12V	24V	48V
	额定电流 Output Current	37.5A	18.8A	9.4A
	电流范围 Current Range	0~37.5A	0~18.8A	0~9.4A
	额定功率 Output Power	450W	451.2W	451.2W
	纹波与噪声 Ripple and Noise(备注6)	150mV	150mV	200mV
	电压调整范围 Adj-voltage range	11.2~13.3V	21.8~26.8V	44.6~53.7V
	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	12ms (230Vac/100% load), 10ms (115Vac/100% load)		

	启动时间 Startup time	≤3s (115Vac/230Vac ; 100% load)		
输入 Input	电压范围 Voltage Range	90~132Vac / 180~264Vac (需通过开关选择, 开关设置在 230V Select by switch, switch on 230Vac)		
	频率范围 Frequency Range	47~63Hz		
	输入电流 Input Current	11A / 100Vac, 6A / 200Vac		
	浪涌电流 Inrush Current	65A/230Vac, Cold start		
	效率 Efficiency	88.5%	89%	90%
保护 Protections	过电压 OVP	13.5~16.2V	27~33V	54~66V
	过负载 OCP	41.25~75A	20.7~37.5A	10.31~18.75A
	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	-20 ~ +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	5% ~ 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: 1500Vac/2121Vdc; O/P - FG: 500Vac/707Vdc		
	绝缘阻抗 Insulating resistance	≥100Mohm (500VDC / 25℃ / 90% RH)		
	漏电流 Leakage Current	<1.0mA / 240Vac		
	静电放电 ESD	IEC/EN61000-4-2, CLASS B; Contact1±8KV / Air ±15KV ;		
	电磁兼容 EMC	CISPR32 / EN55032, CLASS A		
其它 Others	质保期 Warranty	3Years		
	MTBF	Telcordia SR-332 (Bellcore) ≥500K hrs		
	尺寸 SIZE	215mm * 115mm * 35mm (L * W * H)		
	包装 Packing	0.82KG; 13PCS/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. 此电源不符合 EN61000-3-2 标准中规定的谐波电流要求, 如应用无谐波电流要求或可自行解决谐波电流问题, 可选型本产品。 This power supply don't meet the harmonic requirements in EN61000-3-2 standard. It can be selected if no harmonic requirements are applied or this problems can be solved by themselves.
	5. 产品在任何稳态工作条件下, 总功率不应超出标示的额定功率且输出电流不应超出额定输出电流。 Under any operating conditions, the total power should not exceed the rated power indicated and the output 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 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



■ 峰值功率曲线 Peak power Curve

$$P_{av} = \frac{P_{pk} \times t + P_{npk} \times (T-t)}{T} \leq P_{rated}$$

$$Duty = \frac{t}{T} \times 100\% \leq 35\%$$

$$t \leq 5 \text{ sec}$$

P_{av} : 平均输出功率 (W)

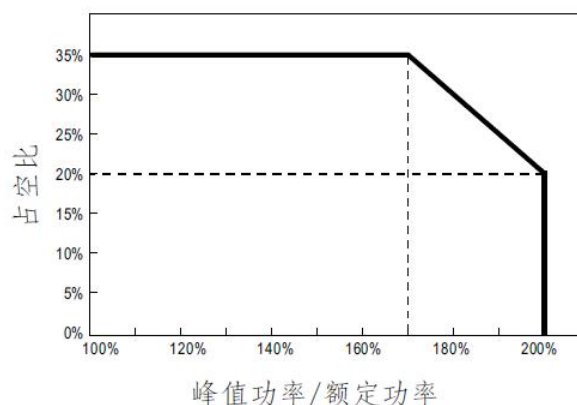
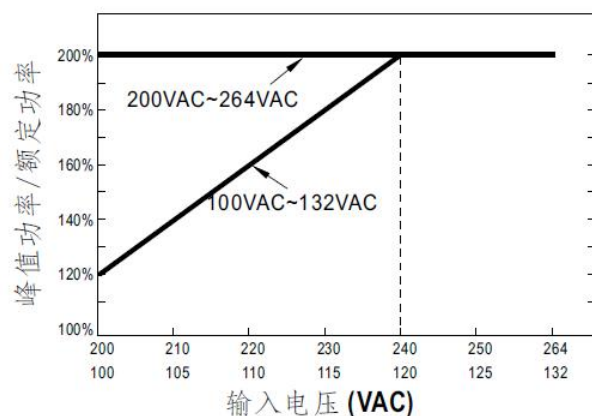
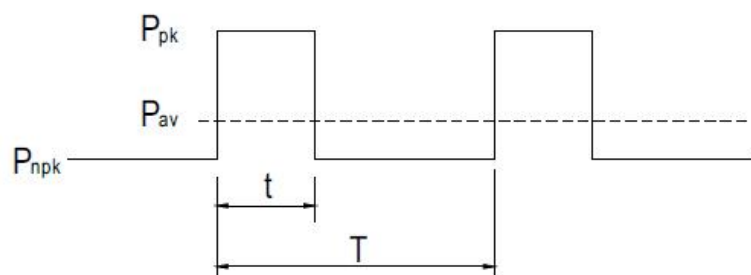
P_{pk} : 峰值输出功率 (W)

P_{npk} : 非峰值输出功率 (W)

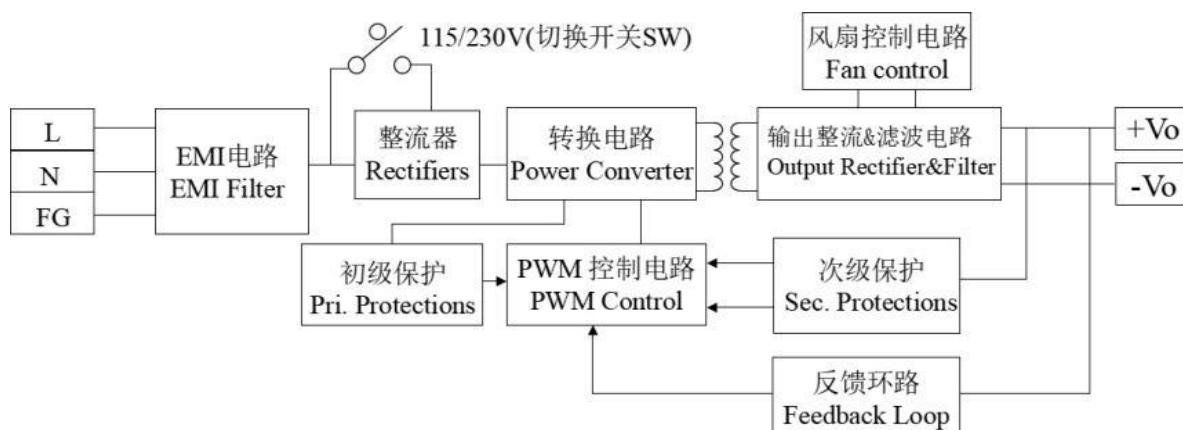
P_{rated} : 额定输出功率 (W)

t : 峰值功率宽度 (sec)

T : 时间 (sec)

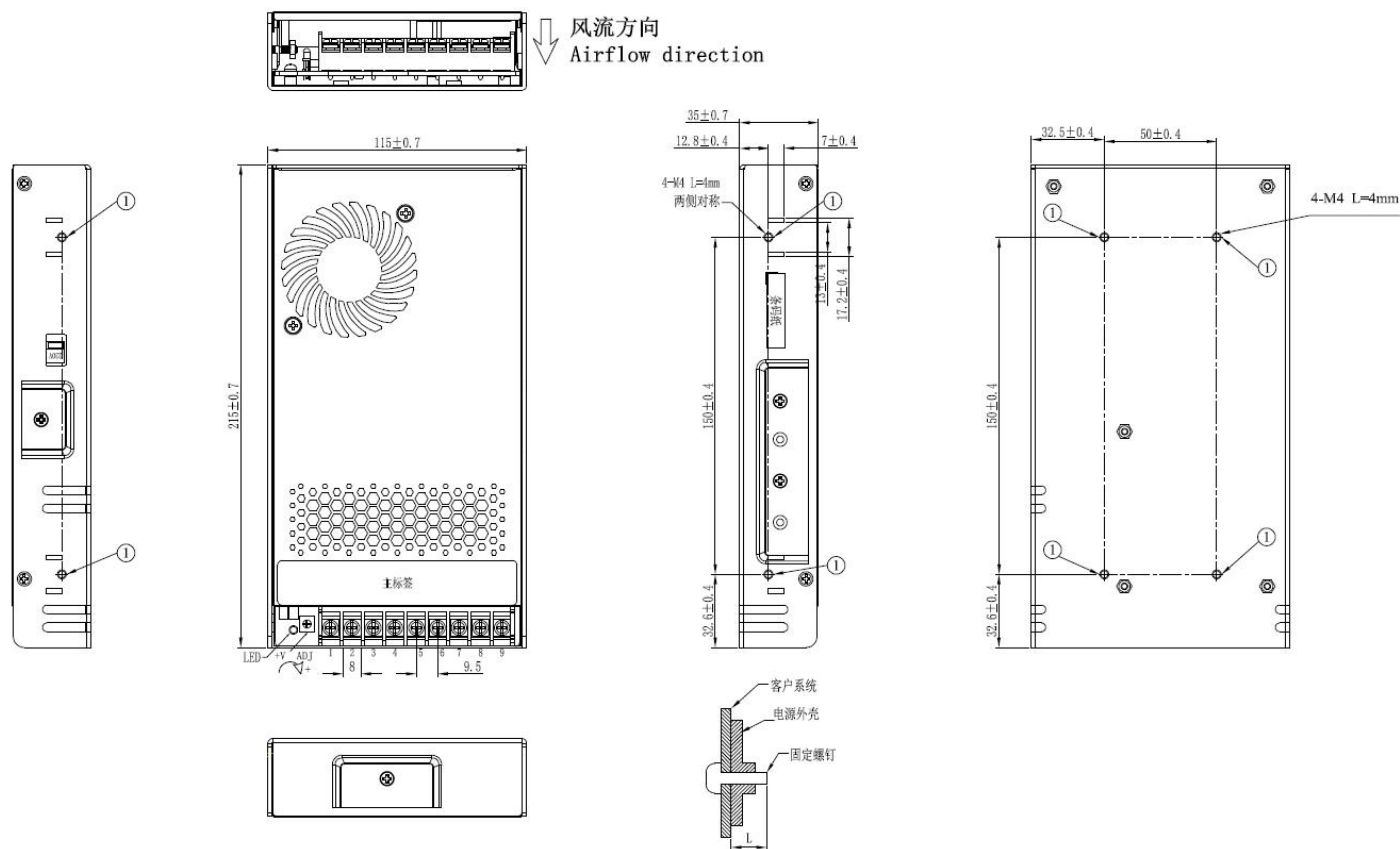


■ 方框图 Block Diagram



结构参数 Mechanical Overview

■ 结构尺寸 Shape Size



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

孔编号	推荐螺丝型号	最大穿孔深度 L	推荐安装扭矩
①	M4	4mm	7~10Kgf.cm

* 安装手册请查阅网址: <https://www.gwpst.com>

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