

## ■ 特性 Features:

- 输入电压范围: 90-132Vac/180-264Vac/250-370Vdc  
The input voltage : 90-132Vac/180-264Vac/250-370Vdc
- 两倍峰值功率  
Peak Power up to 200%
- 工作温度高达 65℃  
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、EN62477 等认证标准  
Comply with IEC/EN/UL62368, GB4943, GB9254 and EN62477 Etc.certification standards
- 高可靠性, 基板三防漆工艺  
High reliability, conformal coating process for substrates(optional)
- 质保期: 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:

ERS600CW-P2 系列是一款 600W 单组输出 AC 转 DC 电源, 采用 115VAC 或 230VAC 交流输入 (通过开关选择), 整系列提供 12V, 24V 和 48V 直流隔离输出; 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, ERS600CW-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。

ERS600CW-P2 series is a 600W single output AC to DC PSU, Adopt 115VAC or 230VAC AC input (selected by switch), The whole series provides 12V, 24V and 48V DC isolated output; 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. ERS600CW-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<br>POWER | 产品型号<br>MODEL    | 输出功率<br>Pout | 输入电压<br>Vin | 输出电压<br>Vout | 输出电流<br>Iout | 效率 (%)<br>EFF. | 安规认证<br>SAFETY |
|--------------|------------------|--------------|-------------|--------------|--------------|----------------|----------------|
| 600W         | GW-ERS600CW-12P2 | 600W         | 90-132VAC   | 12V          | 50A          | 90.0           | CQC/UL/CB      |
|              | GW-ERS600CW-24P2 | 600W         | 180-264VAC  | 24V          | 25A          | 91.0           |                |
|              | GW-ERS600CW-48P2 | 600W         | 250-370Vdc  | 48V          | 12.5A        | 92.0           |                |

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

## 通用参数 General Specification

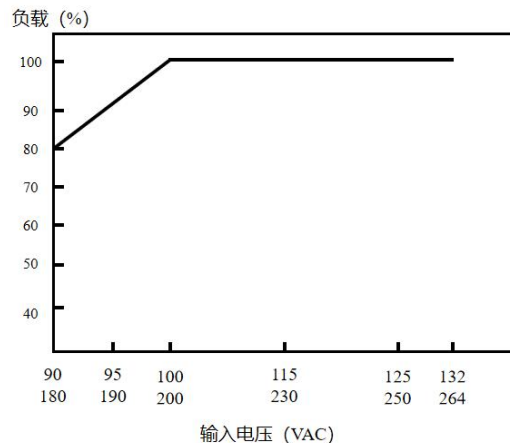
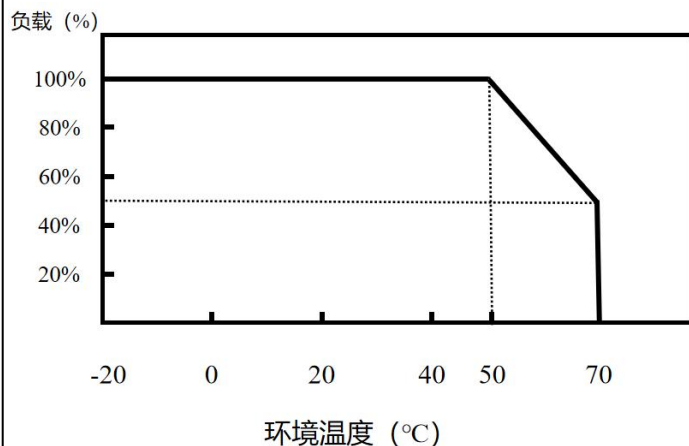
| 型号 MODEL     |                             | GW-ERS600CW-12P2                                 | GW-ERS600CW-24P2 | GW-ERS600CW-48P2 |
|--------------|-----------------------------|--------------------------------------------------|------------------|------------------|
| 输出<br>Output | 输出电压 Output Voltage         | 12V                                              | 24V              | 48V              |
|              | 额定电流 Output Current         | 50A                                              | 25A              | 12.5A            |
|              | 电流范围 Current Range          | 0~50A                                            | 0~25A            | 0~12.5A          |
|              | 额定功率 Output Power           | 600W                                             | 600W             | 600W             |
|              | 纹波与噪声 Ripple and Noise(备注6) | 200mV                                            | 240mV            | 360mV            |
|              | 电压调整范围 Adj-voltage range    | 11.4-12.6V                                       | 22.8-26.4V       | 45.6-52.8V       |
|              | 稳压精度 Voltage stability(备注2) | ±1.5%                                            | ±1.0%            | ±1.5%            |
|              | 线性调整率 Line regulation       | ±0.5%                                            | ±0.5%            | ±1.0%            |
|              | 负载调整率 Load regulation       | ±1.0%                                            | ±1.0%            | ±1.5%            |
|              | 保持时间<br>Hold-up time        | 20ms (230Vac/100% load), 10ms (115Vac/100% load) |                  |                  |
|              | 启动时间<br>Startup time        | ≤3s (230Vac ; 100% load)                         |                  |                  |

|                         |                            |                                                                                         |          |          |
|-------------------------|----------------------------|-----------------------------------------------------------------------------------------|----------|----------|
| 输入<br>Input             | 电压范围<br>Voltage Range      | 90-132VAC/180-264VAC(通过开关切换)                                                            |          |          |
|                         | 频率范围<br>Frequency Range    | 47~63Hz                                                                                 |          |          |
|                         | 输入电流<br>Input Current      | 12A/115Vac    7.5A/230Vac                                                               |          |          |
|                         | 浪涌电流 Inrush Current        | 75A / 230Vac, Cold start                                                                |          |          |
|                         | 效率 Efficiency              | 90.0%                                                                                   | 91.0%    | 92.0%    |
| 保护<br>Protection<br>s   | 过电压 OVP                    | 13.4~17.0V                                                                              | 27~32.4V | 54~60V   |
|                         | 过负载 OCP                    | 55~90A                                                                                  | 30~45A   | 15~22.5A |
|                         | 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<br>Environmen<br>tal | 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<br>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; Contact ±8KV / Air ±15KV ;                                    |          |          |
|                         | 电磁兼容 EMC                   | CISPR32 / EN55032, CLASS A                                                              |          |          |
| 其它<br>Others            | 质保期 Warranty               | 3Years                                                                                  |          |          |
|                         | MTBF                       | Telcordia SR-332 (Bellcore) ≥500K hrs                                                   |          |          |
|                         | 尺寸 SIZE                    | 225mm * 124mm * 41mm (L * W * H)                                                        |          |          |
|                         | 包装 Packing                 | 0.9KG; 14PCS/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,  $T_a=25^{\circ}\text{C}$ , 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  $5^{\circ}\text{C}/1000\text{m}$   
When the power supply is working above an altitude of 2000m, the  $T_a$  must be derated by  $5^{\circ}\text{C}/1000\text{m}$
  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 47 $\mu\text{F}$  低 ESR 电容和 0.1 $\mu\text{F}$  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 $\mu\text{F}$  low ESR capacitor and 0.1 $\mu\text{F}$  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

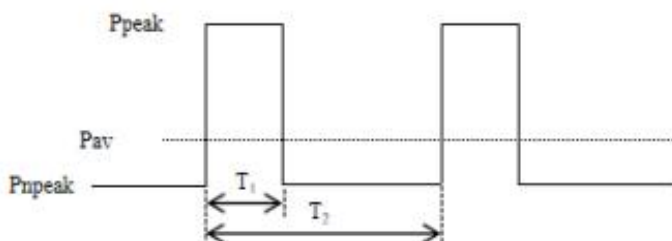


## ■ 峰值功率曲线 Peak power Curve

$$P_{av} := \frac{P_{peak} \cdot T_1 + P_{npeak} \cdot (T_2 - T_1)}{T_2} \leq P_r$$

$$\text{Duty} := \frac{T_1}{T_2} \cdot 100\% \leq 35\%$$

$$T_1 \leq 5S$$



$P_{av}$ : 平均输出功率 (W)

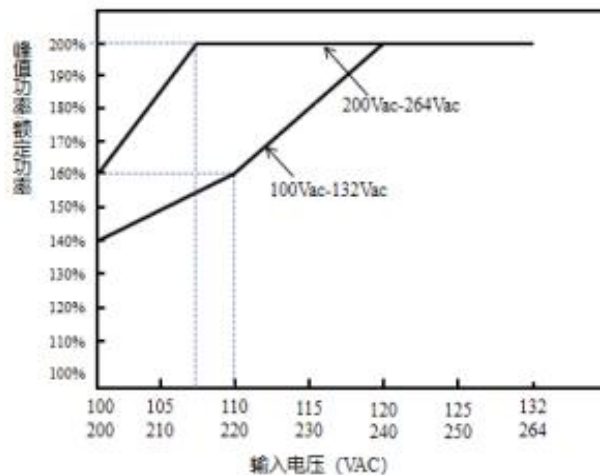
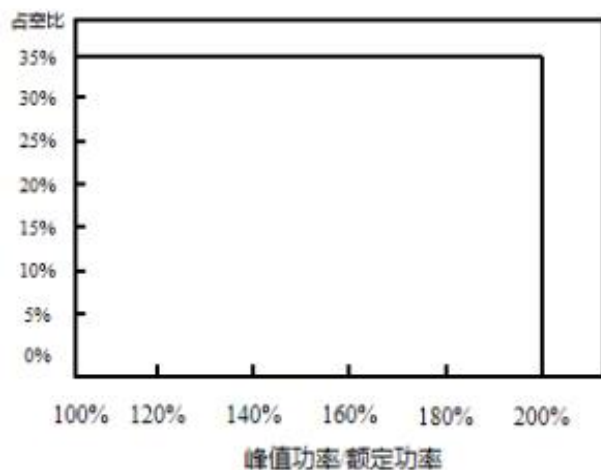
$P_{peak}$ : 峰值输出功率 (W)

$P_{npeak}$ : 非峰值输出功率 (W)

$P_r$ : 额定输出功率 (W)

$T_1$ : 峰值功率持续时间 (s)

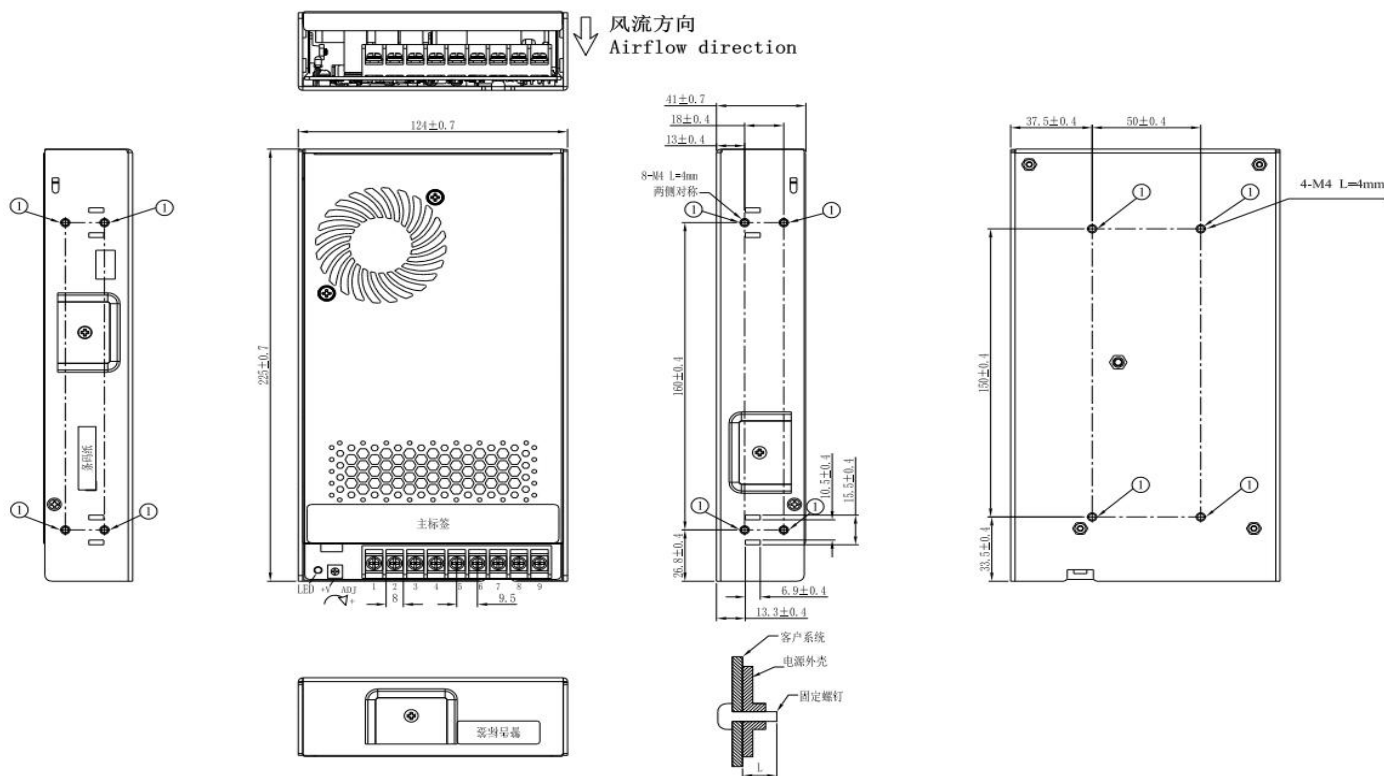
$T_2$ : 周期时间 (s)





## 结构参数 Mechanical Overview

## ■ 结构尺寸 Shape Size

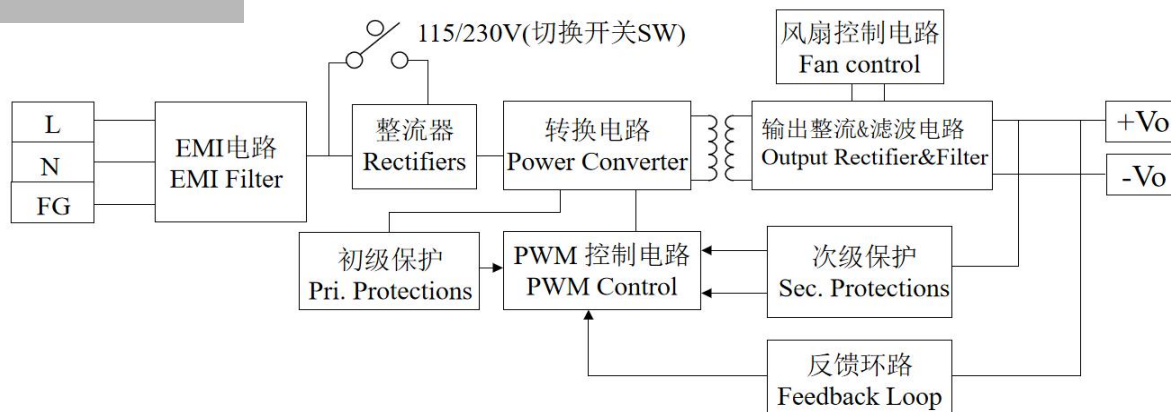


## 端子引脚描述 Terminal PIN Description

| 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 |

## ■ 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>