

## ■ 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

- 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

- 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:

ERS200CW-P2 系列是一款 200W 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; 30mm 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, ERS200W-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。

ERS200CW-P2 series is a 200W 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 30mm 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. ERS200W-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 |
|--------------|------------------|--------------|-----------------------------------------|--------------|--------------|----------------|----------------|
| 200W         | GW-ERS200CW-12P2 | 200.4W       | 90~132Vac/<br>180~264Vac/<br>250~370Vdc | 12V          | 16.7A        | 86.5           | CQC, CB        |
|              | GW-ERS200CW-24P2 | 199.2W       |                                         | 24V          | 8.3A         | 87             |                |
|              | GW-ERS200CW-48P2 | 201.6W       |                                         | 48V          | 4.2A         | 87.5           |                |

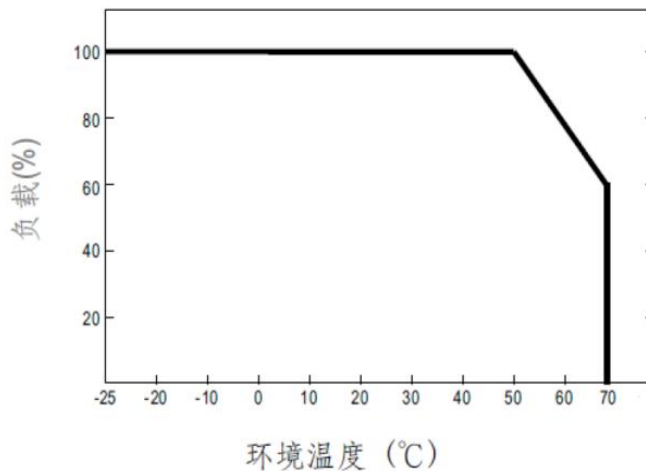
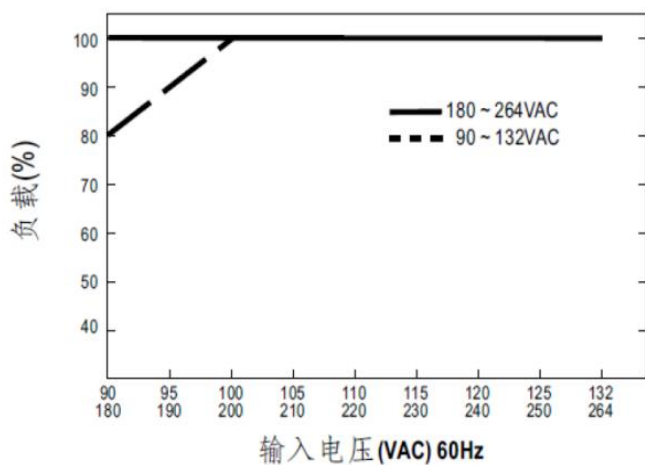
\*其它安规需求认证中 Other safety requirements are pending certification.

## 通用参数 General Specification

| 型号 MODEL     |                             | ERS200CW-12 P2                                                                  | ERS200CW-24 P2 | ERS200CW-48 P2 |
|--------------|-----------------------------|---------------------------------------------------------------------------------|----------------|----------------|
| 输出<br>Output | 输出电压 Output Voltage         | 12V                                                                             | 24V            | 48V            |
|              | 额定电流 Output Current         | 16.7A                                                                           | 8.3A           | 4.2A           |
|              | 电流范围 Current Range          | 0~16.7A                                                                         | 0~8.3A         | 0~4.2A         |
|              | 额定功率 Output Power           | 200.4W                                                                          | 199.2W         | 201.6W         |
|              | 纹波与噪声 Ripple and Noise(备注6) | 150mV                                                                           | 150mV          | 150mV          |
|              | 电压调整范围 Adj-voltage range    | 11.2~13.2V                                                                      | 21.9~26.6V     | 43.7~53.7V     |
|              | 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%                                                                           | ±1.0%          | ±0.5%          |
|              | 保持时间 Hold-up time           | 30ms (230Vac/100% load), 25ms (115Vac/100% load)                                |                |                |
|              | 启动时间 Startup time           | ≤3s (115Vac/230Vac ; 100% load)                                                 |                |                |
| 输入<br>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          | 4.5A / 100Vac, 2.3A / 200Vac                                                    |                |                |
|              | 浪涌电流 Inrush Current         | 150A, 115Vac/230Vac, Cold start                                                 |                |                |
|              | 效率 Efficiency               | 86.5%                                                                           | 86.5%          | 87%            |
| 保护           | 过电压 OVP                     | 13.5~16.8V                                                                      | 27~33V         | 54~64V         |

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                           |        |       |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------|-------|
| Protections         | 过负载 OCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 34~40A                                                                                    | 17~20A | 9~11A |
|                     | 过温度 OTP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 异常条件移除后可自动恢复<br>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<br>Hiccup mode, The PSU can be Auto-recovered when the fault is removed |        |       |
| 环境<br>Environmental | 工作温度 Operating Temperature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -25 ~ +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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <1.5mA / 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<br>Others        | 固保期 Warranty                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 3Years                                                                                    |        |       |
|                     | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Telcordia SR-332 (Bellcore) ≥500K hrs                                                     |        |       |
|                     | 尺寸 SIZE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 215mm * 115mm * 30mm (L * W * H)                                                          |        |       |
|                     | 包装 Packing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0.654KG; 15PCS/Box                                                                        |        |       |
| 备注<br>Remark        | <div>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。<br/>Unless otherwise specified, all spec. are measured at 230Vac, rated load, Ta=25℃, Please refer to the test report.</div> <div>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<br/>The voltage stability includes setting error, linear regulation and load regulation</div> <div>3. 当产品工作于海拔 2000m 以上时，环境温度需降额 5℃/1000m<br/>When the power supply is working above an altitude of 2000m, the Ta must be derated by 5℃/1000m</div> <div>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。<br/>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.</div> <div>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。<br/>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.</div> <div>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。<br/>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.</div> <div>*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 <a href="https://www.gwpst.com">https://www.gwpst.com</a></div> <div>*Disclaimer: The final interpretation rights of the product belong to Great Wall Power Supply Technology Co., Ltd. Details please refer to <a href="https://www.gwpst.com">https://www.gwpst.com</a></div> |                                                                                           |        |       |

■ 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)

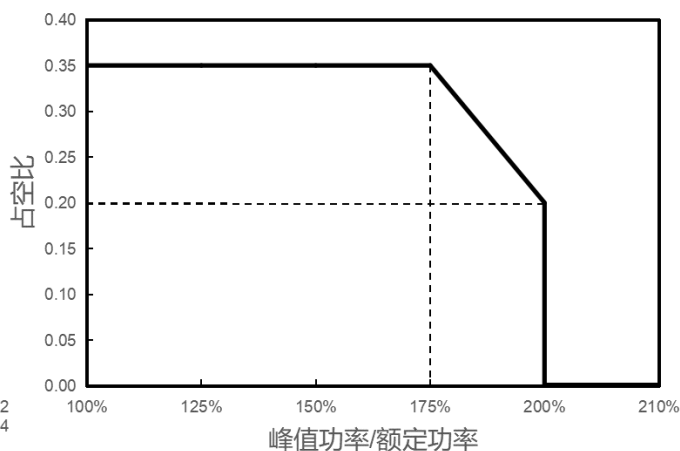
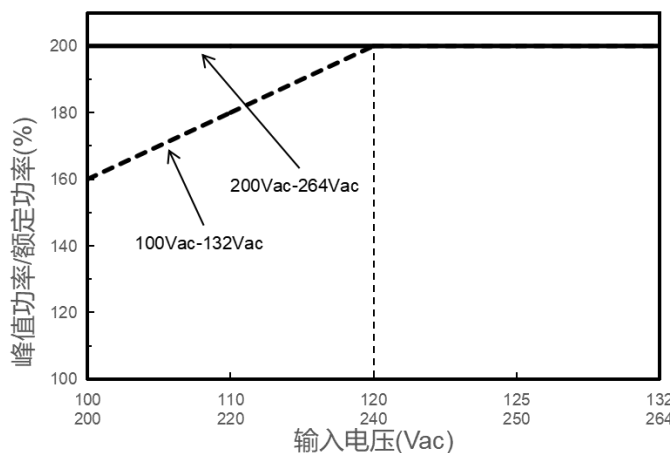
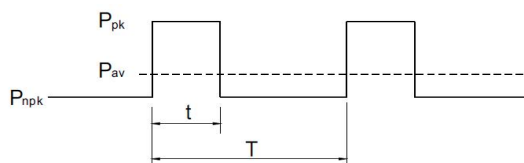
$P_{pk}$  : 峰值输出功率 (W)

$P_{npk}$  : 非峰值输出功率 (W)

$P_{rated}$  : 额定输出功率 (W)

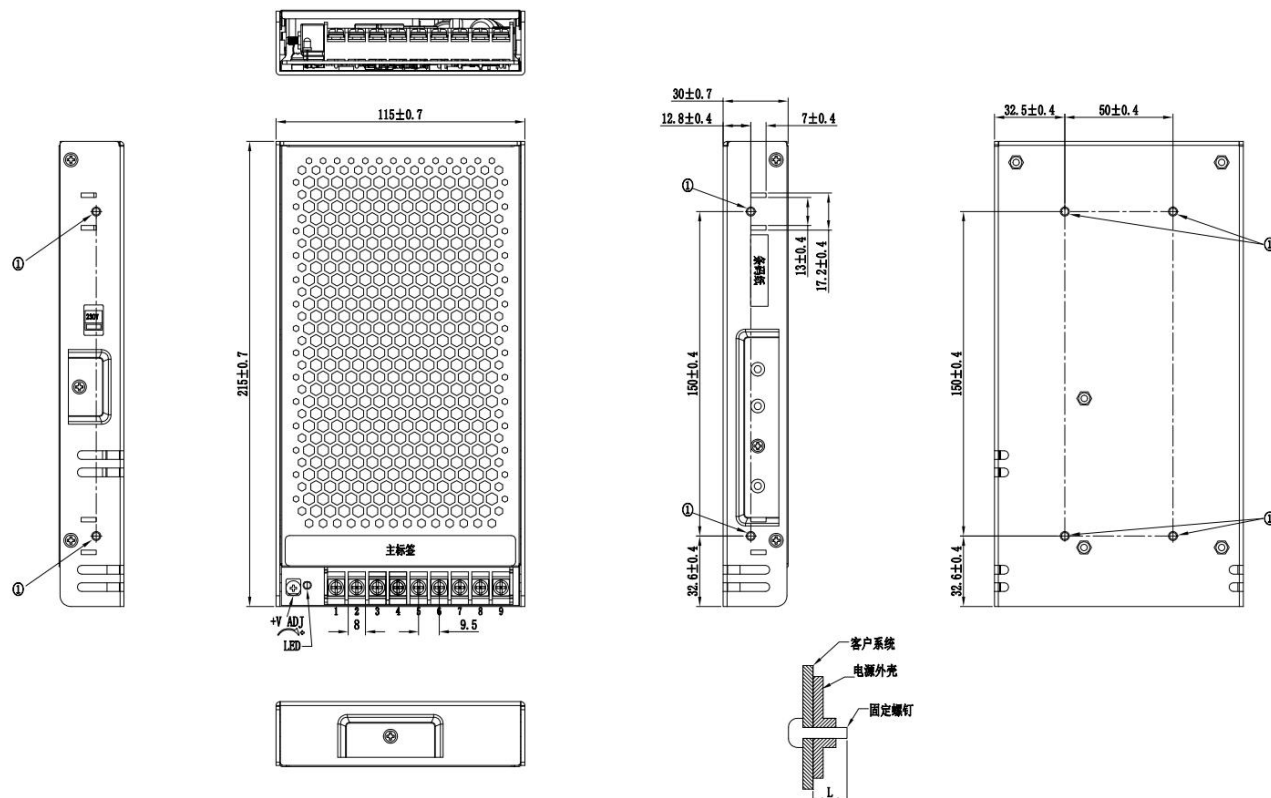
$t$  : 峰值功率宽度 (sec)

$T$  : 时间 (sec)



## 结构参数 Mechanical Overview

## ■ 结构尺寸 Shape Size

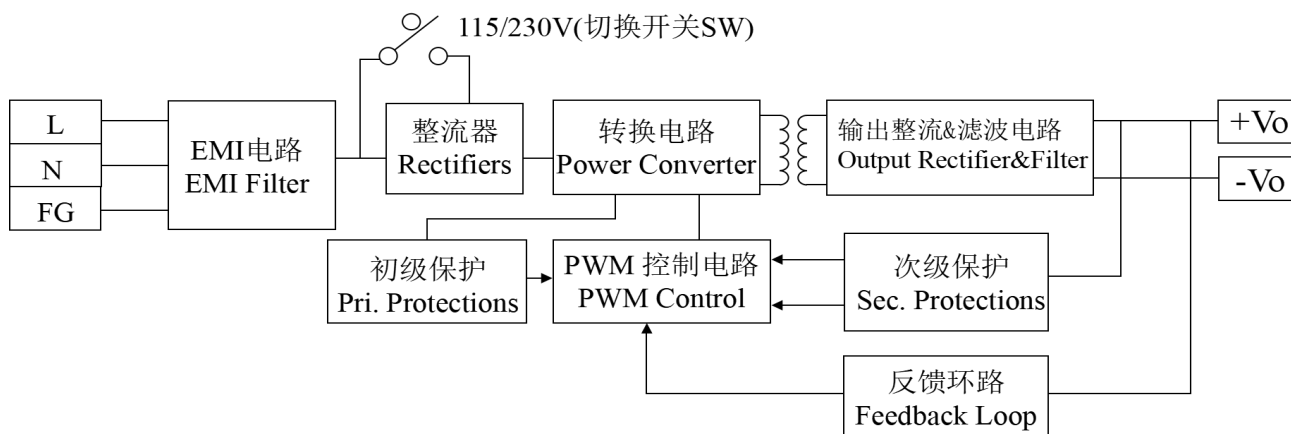


## 端子引脚描述 Terminal PIN Description

| 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 |
| ②   | M4     | 3.5mm    | 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>