



三一精工

电源适配器 Power Supply Adapter

APD-48W



## 特性

- 国际通用全范围交流输入
- 内置 EMI 滤波器
- 过压/过温/过负载保护
- 100%负载老化
- 冷却方式：自冷
- LED 电源指示灯
- 高效率，长寿命和高信赖度
- 可根据用户选型定制

## Characteristic

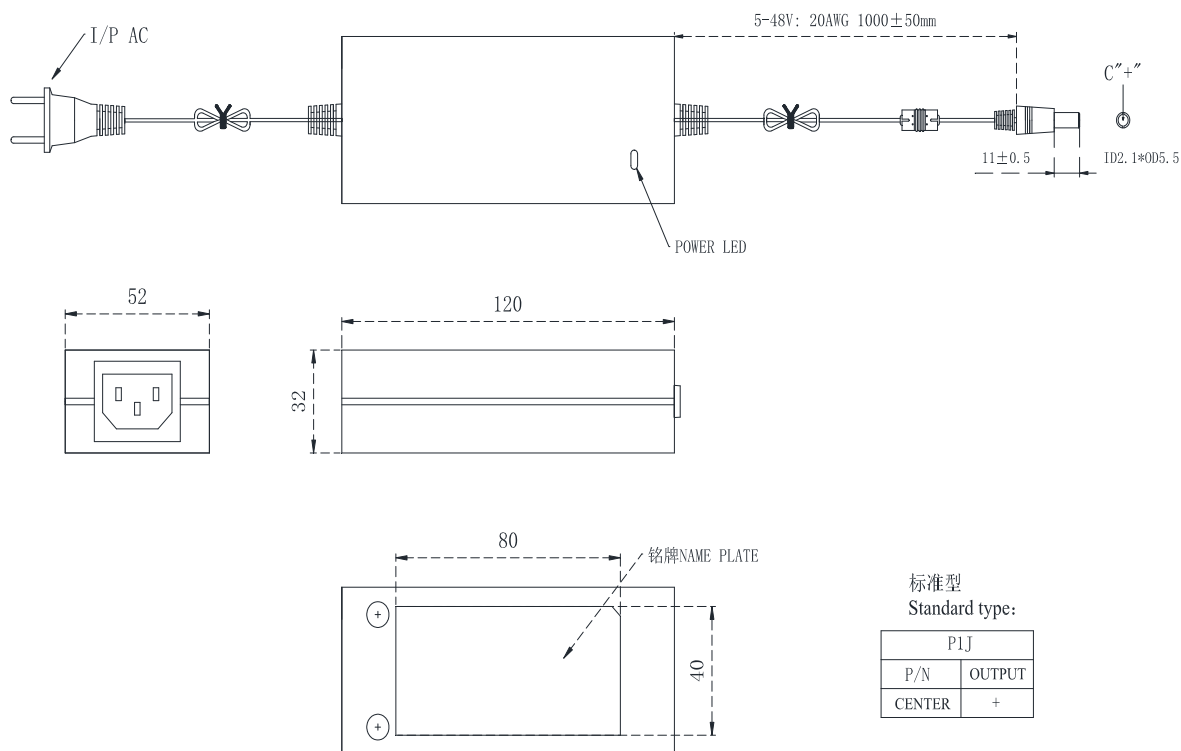
- International Universal AC input/ Full range
- Built-in EMI filter
- Over voltage& temperature & Load Protections
- 100% full load burn-in test
- Cooling: Self-cooling
- LED indicator for power
- High efficiency, long life and high reliability
- Can be customized according to user selection

## 电气规格 SPECIFICATOIN

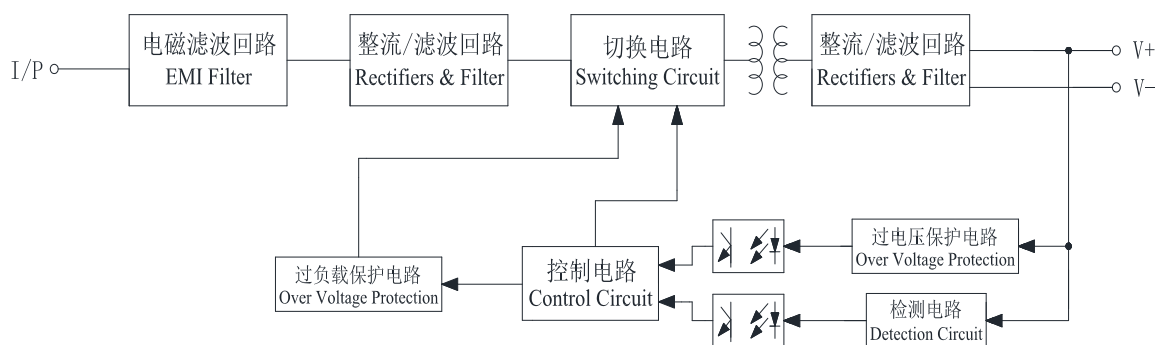
| 型号 Model                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | AD-S0560B                                                                                                                                                    | AD-S0950B | AD-S1240B | AD-S1530B | AD-S1825B | AD-S2420B | AD-S4810B |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| 输出<br>Output                                  | 直流电压 DC Voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 5V                                                                                                                                                           | 9V        | 12V       | 15V       | 18V       | 24V       | 48V       |
|                                               | 额定电流 Rated Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 6A                                                                                                                                                           | 5A        | 4A        | 3A        | 2.5A      | 2A        | 1A        |
|                                               | 电流范围 Current Range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0~6A                                                                                                                                                         | 0~5A      | 0~4A      | 0~3A      | 0~2.5A    | 0~2A      | 0~1A      |
|                                               | 额定功率 Rated Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 30W                                                                                                                                                          | 45W       | 48W       | 45W       | 45W       | 48W       | 48W       |
|                                               | 波纹和噪声(最大)备注 2Ripple & Noise Max Note                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 120mVp-p                                                                                                                                                     | 120mVp-p  | 120mVp-p  | 120mVp-p  | 120mVp-p  | 120mVp-p  | 120mVp-p  |
|                                               | 电压精度备注 3 Voltage Tolerance Note 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ±5%                                                                                                                                                          | ±5%       | ±5%       | ±5%       | ±3%       | ±3%       | ±3%       |
|                                               | 线性调整率备注 4 Line Regulation (Note 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ±1%                                                                                                                                                          | ±1%       | ±1%       | ±1%       | ±1%       | ±1%       | ±1%       |
|                                               | 负载调整率备注 5 Load Regulation (Note 5)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ±2%                                                                                                                                                          | ±2%       | ±2%       | ±2%       | ±2%       | ±2%       | ±2%       |
|                                               | 启动, 上升, 保持时间 Setup、Rise Time                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 500ms 200ms 30ms 满载时 Full load                                                                                                                               |           |           |           |           |           |           |
| 输入<br>Input                                   | 交流插头 AC plug                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | AC 插头-UK                                                                                                                                                     |           | AC 插头-CN  |           | AC 插头-EN  |           | AC 插头-US  |
|                                               | 电压范围 Voltage Range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 100Vac~240Vac                                                                                                                                                |           |           |           |           |           |           |
|                                               | 频率范围 Frequency Range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 50/60Hz                                                                                                                                                      |           |           |           |           |           |           |
|                                               | 效率最大 Efficiency (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 80%                                                                                                                                                          | 80%       | 84%       | 83%       | 84%       | 82%       | 82%       |
|                                               | 交流电流 Ac Current (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.4A/200Vac                                                                                                                                                  |           |           |           |           |           |           |
|                                               | 浪涌电流最大 Inrush Current (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 50A/220Vac                                                                                                                                                   |           |           |           |           |           |           |
|                                               | 漏电流最大 Leakage Current (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | < 0.6mA/220Vac                                                                                                                                               |           |           |           |           |           |           |
| 保护<br>Protection                              | 过负载 Over Load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 额定输出功率的 Rated output power: 110%~240%<br>保护模式: 打嗝模式, 负载异常条件移除后可自动恢复<br>Protection type: Hiccup mode, recovers automatically after fault condition is removed |           |           |           |           |           |           |
|                                               | 过电压 Over Voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 额定输出电流的 Rated output Voltage:115%~135%<br>保护模式: 二极管钳位 Protection mode: diode clamp                                                                           |           |           |           |           |           |           |
|                                               | 过温度备注 5 Over Temp (Note 5)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 晶体内部接点温度超过 140℃, 启动过温保护。<br>Crystal internal contact temperature exceeds 140 °C, start over temperature protection.                                          |           |           |           |           |           |           |
|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 保护模式: 关闭输出电压, 温度下降后自动恢复<br>Protection mode: turn off the output voltage, the temperature drops automatically resume                                          |           |           |           |           |           |           |
|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                              |           |           |           |           |           |           |
| 环境<br>Environment                             | 工作温度 Working Temp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -0℃~50℃ (请参照“减额曲线” Refer to “Derating curve”)                                                                                                                |           |           |           |           |           |           |
|                                               | 工作湿度 Working Humidity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0~90%RH, 无冷凝 non-condensing                                                                                                                                  |           |           |           |           |           |           |
|                                               | 储存温度、湿度 Storage Temp、Humidity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -10℃~75℃ 10~98%RH, 无冷凝 non-condensing                                                                                                                        |           |           |           |           |           |           |
|                                               | 温度系数 Temp. Coefficient                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ±0.03%/℃ (0~50℃)                                                                                                                                             |           |           |           |           |           |           |
|                                               | 耐震荡 Vibration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 10~500Hz, 5G 10 分钟/周期, X、Y、Z 轴各 60 分钟 10Min/1 cycle, period for 60min,each along X,Y,Z axes                                                                  |           |           |           |           |           |           |
| 安规<br>和电磁兼容<br>备注 7<br>Safety & EMC<br>Note 7 | 安全规范 Safety Standards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | GB4943, EN60950                                                                                                                                              |           |           |           |           |           |           |
|                                               | 耐压 Withstand Voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | I/P-O/P:2KVac                                                                                                                                                |           |           |           |           |           |           |
|                                               | 绝缘抗阻 Isolation Resistance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | I/P-O/P: 100M Ohms/500VDC/25℃/70%RH                                                                                                                          |           |           |           |           |           |           |
|                                               | 电磁兼容发射 EMI Conduction Radiation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 符合 Compliance to :EN55022, EN61000-3-2, 3, FCC part15, GB9254 class B, GB17625.1                                                                             |           |           |           |           |           |           |
| 其它<br>Others                                  | 电磁兼容抗扰度 EMS Immunity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 符合 Compliance to :EN61000-4-2, 3, 4, 5, 6, 8, 11, A 级轻工业标准 light industry level, criteria A                                                                  |           |           |           |           |           |           |
|                                               | 寿命 Life                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2 年: 100%负载, 30℃, 8 小时/天 2 years: 100% load, 30, 8 hours / day                                                                                               |           |           |           |           |           |           |
|                                               | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ≥1415.6Khrs                                                                                                                                                  |           |           |           |           |           |           |
|                                               | 尺寸 Dimension                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 120*52*32mm (L*W*H)                                                                                                                                          |           |           |           |           |           |           |
| 连接器<br>Connector                              | 包装 Packing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.2Kg 100pcs/20Kg                                                                                                                                            |           |           |           |           |           |           |
|                                               | 插头 Plug/配线 Wiring                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 详见第二页, 其它型号可依客户需求订制<br>For second pages, other models can be customized according to customer requirements.                                                  |           |           |           |           |           |           |
| 备注<br>Note                                    | 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。<br>If no special instructions are specified, all the specifications are measured at the input of 230VAC, the rated load, the ambient temperature of 25℃.<br>2. 波纹和噪声测量方法: 使用一条 12"双绞线, 同时终端要并联 0.1uF 和 47uF 的电容, 在 20MHZ 带宽下进行量测。<br>Ripple and noise measuring method: using a 12 "twisted pair, at the same time terminal to parallel 0.1uF and 47uF capacitor, in the 20MHZ bandwidth measurement.<br>3. 精度: 包含设定误差, 线性调整率和负载调整率。<br>Curacy: contains setting error, linear adjustment rate and load adjustment rate.<br>4. 线性调整率测量方法: 在额定负载下, 从低电压到高压测试。<br>Linear adjust rate measurement: at rated load, from a low voltage to a high voltage test.<br>5. 负载调整率测量方法: 从 10%到 100%。<br>Load adjustment rate measurement method: from 20% to 100%<br>6. 过温保护是由控制 IC 的功能决定。<br>Overtemperature protection is determined by the function of the control IC. |                                                                                                                                                              |           |           |           |           |           |           |

尺寸 Dimension

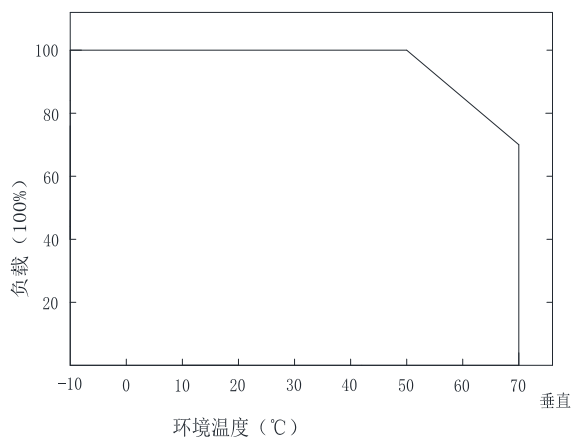
单位: mm



## ■ 方框图



### ■ 减额曲线



## ■ 静态特性曲线

