



# 产品快速安装指南

SP-1U/2U系列 高性能可编程直流电源

18950-658-00(J)

## 引言



尊敬的用户，非常感谢您使用全天自动化能源科技(东莞)有限公司(以下简称“全天科技”)研制的SP-1U/2U系列高性能可编程直流电源产品， 我们由衷地希望本产品可以满足您的需求。

## 资料下载



为了便于您更好地使用此设备，所有机型对应的相关资料及监控软件请到全天科技官网下载，留待以后随时参阅。

功率 ● 电压 ■	1U 电源					2U 电源			
	600W	1000W	1200W	1500W	1600W	1000W	2000W	3000W	4000W
20VDC	60A <sup>[2]</sup>	60A <sup>[2]</sup>	60A <sup>[2]</sup>	-	-	-	-	-	-
32VDC	50A <sup>[2]</sup>	50A <sup>[2]</sup>	50A <sup>[2]</sup>	-	50A <sup>[2]</sup>	200A <sup>[1]</sup>	200A	200A	200A
40VDC	40A <sup>[2]</sup>	40A <sup>[2]</sup>	40A <sup>[2]</sup>	-	40A <sup>[2]</sup>	120A <sup>[1]</sup>	120A	120A	120A
75VDC	25A <sup>[2]</sup>	25A <sup>[2]</sup>	25A <sup>[2]</sup>	25A <sup>[2]</sup>	-	-	-	-	60A
80VDC	-	-	-	-	-	60A <sup>[1]</sup>	60A	60A	-
120VDC	-	-	-	-	-	40A <sup>[1]</sup>	40A	40A	40A
150VDC	10A <sup>[2]</sup>	10A <sup>[2]</sup>	10A <sup>[2]</sup>	10A <sup>[2]</sup>	-	30A <sup>[1]</sup>	30A	30A	30A
200VDC	8A <sup>[2]</sup>	8A <sup>[2]</sup>	8A <sup>[2]</sup>	8A <sup>[2]</sup>	-	24A <sup>[1]</sup>	24A	24A	24A
600VDC	-	-	-	-	-	10A <sup>[1][2]</sup>	10A <sup>[2]</sup>	10A <sup>[2]</sup>	10A <sup>[2]</sup>
800VDC	-	-	-	-	-	7.5A <sup>[1][2]</sup>	7.5A <sup>[2]</sup>	7.5A <sup>[2]</sup>	7.5A <sup>[2]</sup>

### 选型指导

SP   功率 电压 例如 SP200VDC1500W  
注: SP 是 Switching Power 的缩写。

### [1] 选型指导

SPS   功率 电压

[2] 该型号电源的DVM与外部控制功能为选配项。

## 开箱检查

请您在收到设备的第一时间内对其进行全面检查，如有发现可能导致设备损坏的包装损坏，请立即通知运输公司或与全天科技联系，并提供破损处的照片。

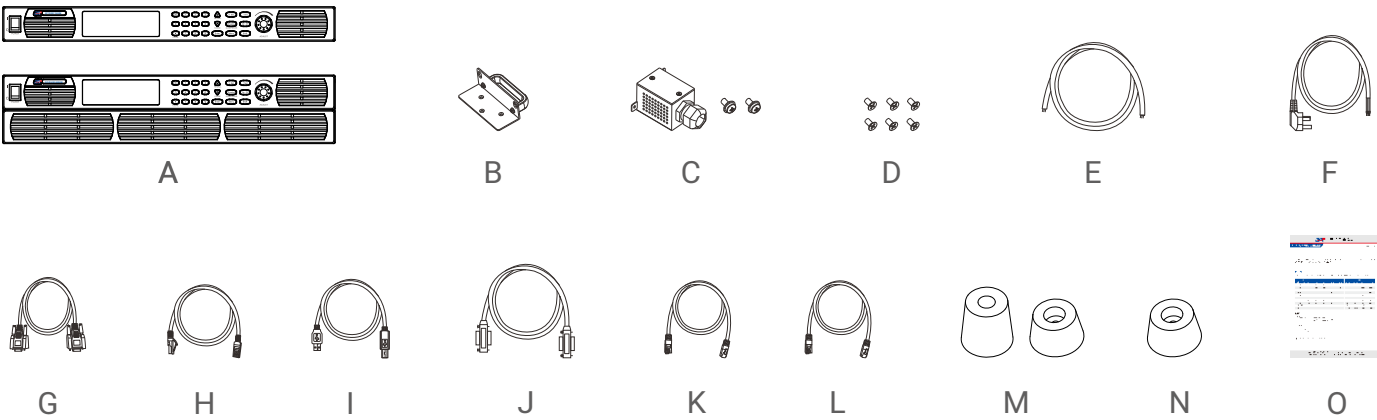
待您打开包装后，请对照此清单检查附件内容，如有任何缺失，请尽快联系您的代理或者全天科技，以便保证您正常的使用。

## 装箱清单

物件	说明	数量	备注
A	SP-1U/2U系列高性能可编程直流电源	1 台	客户选定型号
B	握把	2 个	标配
C	输入防护罩 & 固定螺丝组	1 组	标配(适用于2U机型)
D	固定螺丝组	6颗	固定握把
E	电源线 <sup>[1]</sup>	1 根	标配
F	三芯插头电源线(10A或16A) <sup>[2]</sup>	1 根	选配
G	RS-232 通讯线缆	1 根	标配
H	LAN 通讯线缆( 标准568A-568B)	1 根	选配
	LAN 通讯线缆( 标准568A-568A)	1 根	选配
I	USB 通讯线缆	1 根	标配
J	GPIOB 通讯线缆	1 根	选配
K	均流线缆	1 根	并联均流时连接
L	系统总线通讯线缆	1 根	主从通讯时连接
M	前/后脚垫(适用于1U机型)	各2个	标配
N	脚垫(适用于2U机型)	4个	标配
O	快速安装指南	1 份	标配

[1] 1U机型标配三芯插头电源线(10A)，2U机型标配电源线缆(1.5M)。

[2] 请连接前务必确认输入电压/电流范围满足此线缆的使用要求，否则可能烧坏此电源线缆。



## 重要说明

### 使用环境

- 请在温度为0~40℃，相对湿度为10%~90%的实验室或测试车间使用此精密电源。
- 请勿在高温条件下长时间使用电源，如果电源的机壳温度超过40℃，请先暂停使用，待其温度下降至正常温度后再使用，避免温度过高影响其正常使用。
- 请勿在高温条件下长时间使用电源，且部分机种在40~50℃的环境中请降额运行，长时间过温运行会触发过温保护，请采取措​​施，待其温度下降至正常温度后再使用，避免温度过高影响其正常使用。
- 电源的冷却方式为强制风冷，请勿遮挡电源背后的通风口，保证电源前面板与墙壁或物体有20cm以上的间距。
- 请勿在含有大量粉尘、震动剧烈、日光直射或有腐蚀性气体的环境下使用电源。

### 保存

请将本机储存在-20℃~70℃，0%~90%RH无结露的环境中，若长时间不使用，请以原包装或其他类似的包装保存于干燥阴凉处。

### 维护与清洁

清洁前，必须移除机器的输入电源线，可用毛刷或者纱布轻轻地擦去机器外部的灰尘。当外壳的污渍用毛刷等无法清除时，可用挥发性液体(如去渍油)擦拭机壳，不可用腐蚀性液体以免破坏机壳。前面板VFD可用纱布沾肥皂水或软性清洁剂清洁。机器内部的清洁必须使用低压力空气枪将机器内部的灰尘清除，最好送给经销商代为清洁。

### 电源电压

在接上电源之前，请务必确认电源的输入电压满足其要求，且开关处于OFF状态。



注意!

- 断开输入电源线前不可以断开保护地线，接通输入电源前要先接通保护地线。

### 保险丝

安装于本机内部的电源保险丝，属于硬件多重保护设计，正常使用时极不易断开，若有熔断现象代表机内其他故障而导致提前保护，建议回厂检修。



警告!

- 不建议使用者自行拆卸机壳更换保险丝，以免误装导致危险!

### 使用注意事项

- 接通电源前，请确认各直流电源的开关处于OFF状态，且输出端子已做必要防护。
- 直流电源输出前请检查各设定值是否符合输出要求。
- 按IEC61010标准配置符合电流要求的输入/输出线缆。

## 质保期限

- 全天科技SP-1U/2U系列 高性能可编程直流电源产品(以下简称“产品”)的质保期限为2年，或参考相应的销售合同条款执行。
- 质保期限不因产品或部件的更换而延长或重新计算，您仍可在原质保期限内继续享受质保服务。

### Preface

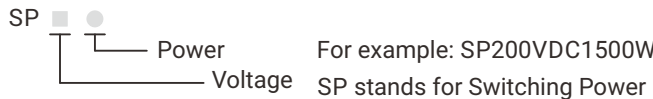
Dear customer, thank you for using SP-1U/2U Series High Performance Programmable DC Power Supply, a product developed & manufactured by APM Technologies. We sincerely hope that this product will meet your needs.

### Data Download

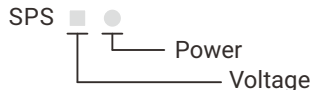
Please download the corresponding documents and monitoring software of all the models from APM website and keep it for your reference at any time.

Power <div>●</div> Voltage <div>■</div>	1U Units					2U Units			
	600W	1000W	1200W	1500W	1600W	1000W	2000W	3000W	4000W
20VDC	60A <sup>[2]</sup>	60A <sup>[2]</sup>	60A <sup>[2]</sup>	-	-	-	-	-	-
32VDC	50A <sup>[2]</sup>	50A <sup>[2]</sup>	50A <sup>[2]</sup>	-	50A <sup>[2]</sup>	200A <sup>[1]</sup>	200A	200A	200A
40VDC	40A <sup>[2]</sup>	40A <sup>[2]</sup>	40A <sup>[2]</sup>	-	40A <sup>[2]</sup>	120A <sup>[1]</sup>	120A	120A	120A
75VDC	25A <sup>[2]</sup>	25A <sup>[2]</sup>	25A <sup>[2]</sup>	25A <sup>[2]</sup>	-	-	-	-	60A
80VDC	-	-	-	-	-	60A <sup>[1]</sup>	60A	60A	-
120VDC	-	-	-	-	-	40A <sup>[1]</sup>	40A	40A	40A
150VDC	10A <sup>[2]</sup>	10A <sup>[2]</sup>	10A <sup>[2]</sup>	10A <sup>[2]</sup>	-	30A <sup>[1]</sup>	30A	30A	30A
200VDC	8A <sup>[2]</sup>	8A <sup>[2]</sup>	8A <sup>[2]</sup>	8A <sup>[2]</sup>	-	24A <sup>[1]</sup>	24A	24A	24A
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800VDC	-	-	-	-	-	7.5A <sup>[1][2]</sup>	7.5A <sup>[2]</sup>	7.5A <sup>[2]</sup>	7.5A <sup>[2]</sup>

#### Model guide



#### <sup>[1]</sup> Model guide



<sup>[2]</sup> For these models, the DVM and Analog input function is optional.

### Unpacking

Once you receive the product, please immediately check if there is any packaging damage that may indicate damage to the product. If you find damage related to product delivery, please immediately notify the transport company. Make sure to take photos documenting the damage to the product, and send them to us so that we can provide you with the best service.

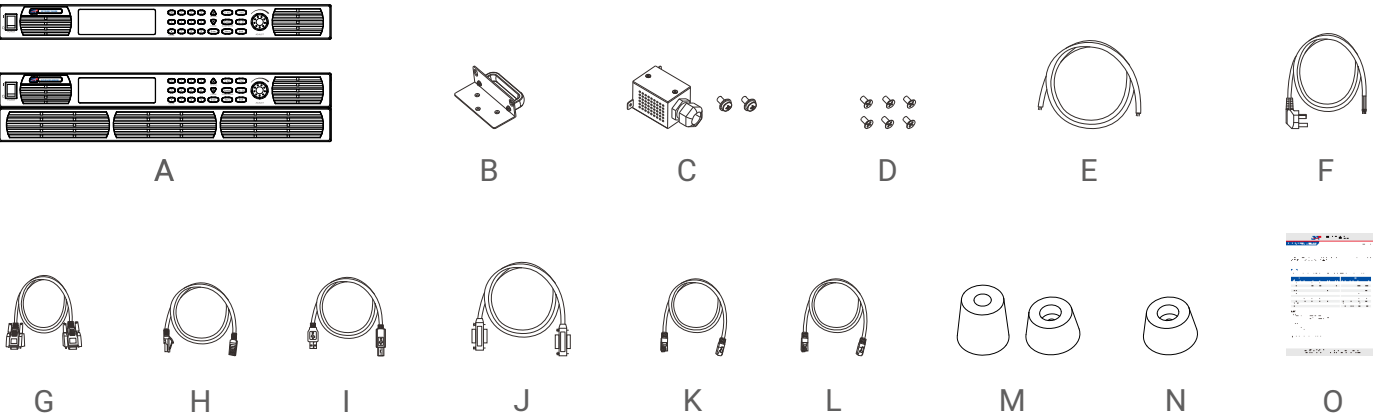
Make sure that you receive the DC power supply and the following accessories at the same time, if any is missing, please contact your agent or APM Technologies.

### Packing List

Item	Descriptions	Quantity	Remarks
A	SP-1U/2U Series Programmable DC Power Supply	1	As ordered
B	Rack Mount Brackets	2	Standard
C	Input Terminal Cover Box & Screws	1	Standard(applicable in 2U)
D	Screws	6	Standard
E	Power Cord <sup>[1]</sup>	1	Standard
F	Three-pin Plug Power Cord(10A or 16A) <sup>[2]</sup>	1	Standard
G	RS-232 Communication Cable	1	Standard
H	LAN Communication Cable (568A-568B)	1	Optional
	LAN Communication Cable (568A-568A)	1	Optional
I	USB Communication Cable	1	Standard
J	GPIOB Communication Cable	1	Optional
K	Current Sharing Cable	1	Standard
L	System Bus Communication Cable	1	Standard
M	Front/Rear Pads(applicable in 1U)	each 2	Standard
N	Pads(applicable in 2U)	4	Standard
O	Quick Guide	1	Standard

<sup>[1]</sup> Only 600W model is standard with three-pin plug power cable (16A), The rest models are equipped with power cable(1.5M).

<sup>[2]</sup> Please make sure that the input voltage and current range meets the requirements of this cable before connecting, Otherwise the power cord may burn out.



### Important Notes

#### Operating Environments

- These power supplies must be used in a clean and dry laboratory or testing environment with an ambient temperature of between 0°C and 40°C and a relative humidity of between 10% and 90%.
- Do not prolong the use of this power supply in a high temperature ambient.
- Fans cool the power supply by drawing air through the front and exhausting it out the back. Please assure that 20cm space is present at the front and back of the unit for adequate air circulation.
- Do not operate this product in an environment that contains large amounts of dust, is subject to strong shock and vibration, is in intense direct sunlight or contains corrosive gases.

#### Product Storage

Please store this product in an area with a temperature between -20°C and 70°C and with a relative humidity of between 0% and 90% non-condensing. If the product is not in use for a long time, please keep it in the original carton or other similar packaging and store it in a cool & dry place.

#### Maintenance and Cleaning

Before cleaning, you must disconnect the input power cord of this power supply. Using a brush or sponge, gently wipe off any dust from the units exterior. To clean the products exterior use only a small amount of non-aqueous cleaning solution such as isopropyl alcohol on a clean cloth. Do not use a corrosive or abrasive cleaning solution to clean this product. The display front panel can be cleaned with gauze damped in soft detergent. Cleaning of dust from the interior of this product must be carried out with a low pressure air gun, and we prefer that such a clean work be performed by an authorized dealer on behalf of the user.

#### Power Supply Voltage

Make sure that the AC input voltage is within the product’s operating specification before plugging in or connecting to the source, and that the power switch is in the OFF state.



#### Caution!

- The protective safety earth/ground connection must connect first and disconnect after the AC line and neutral wires. All approved AC power connectors are designed to meet this requirement. If the input wires are directly connected to an AC mains circuit assure that the AC source is deactivated prior to making or disconnecting the connection.

#### Fuse

The AC mains fuses installed inside the product are designed to protect the input from major failures, and should not fail under normal operating conditions. Therefore, any sign of fuse failure is an indication that other part(s) of the product is damaged. If fuse melting happens, we recommend that the product be sent back to us for repair.



#### Warning!

- No user serviceable components enclosed. Do not disassemble the power’s enclosure/case to replace the fuse, as there is a danger of sustaining an electric shock.

#### Operation Precautions

- When the unit is first turned on the DC output is in a deactivated state. It can be activated by pressing the output turn on push button on the front panel or by remote control command.
- Before turning on the DC power output, check that all the setting values of the power supply are in accordance with the load requirements.
- It is recommended to select the input/output cables’ size according to IEC 61010.

### Warranty Period

- The warranty period of APM SP-1U/2U Series High Performance Programmable DC Power Supply is 2 (two) years, or refer to relevant Distributor Agreement terms.
- The warranty period will not be extended or recalculated after a product or component replacement, repaired or replaced products are covered for the remainder of the original warranty period and subject to the conditions outlined in the original warranty.