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High Efficiency

BR-E-P-PPS(AC&DC-)-1805

High Precision

High Stability













Company Profile

APM Technologies (Dongguan) Co., Ltd. is a high-tech enterprise specialized in the research & development (R&D), production and distribution of marine smart system (MSS), PV solar inverter, programmable power supply, automated testing system and automated manufacturing equipment. Our company has complete systems in product planning, research & development, laboratory experiment, testing and quality control. In addition, we have passed the ISO 9001 standard certifications.

APM Technologies' R&D team consists of more than 100 personnel encompassing Ph.D. and master degree holders as well as senior experts in the related industries. By collaborating with a number of domestic and international research teams and maintaining a long term strategic cooperation with leading colleges and universities, our company can ensure products and services are leading the industry. Through applying our professional techniques and technologies to continually innovate and break through, so far APM Technologies has applied for a number of invention patents and already obtained a number of utility patents, design patents, software copyrights and other related patents. Our products have passed ROHS, CE, CSA, UL, FCC.

APM Technologies as one of the prime leaders in programmable power supply, from the beginning to the present, and from the past to the future, has always upheld the company spirit of "Constant Pursuit of Excellence" so as to provide our customers with the "24 Hours a Day of Continuing Services".



Contents

Programmable DC Power Source

Product Features & Introduction	03/04
Product Applicatoin Field	05/06
SP Series 20VDC	07/08
SP Series 32VDC	09/10
SP Series 40VDC	11/12
SP Series 60VDC	13/14
SP Series 75VDC	15/16
SP Series 80VDC/120VDC	17/18
SP Series 150VDC	19/20
SP Series 200VDC	21/22
SP Series 600VDC/800VDC	23/24
Front & Back Panel Introduction	25/26
Product Outline Dimension / Power Supply Monitoring Software	27/28
Application Case	29/32
Power Supply Selection	33/34

Programmable AC Power Source

Icon Introduction & Product Overview	35/36
Basic Functions	37/38
Advanced Functions	39/40
Specification (0.6kW-1kW)	41/44
Specification (1.5kW)	45/48
Specification (2kW-3kW)	49/52
Specification (4kW-5kW)	53/56
Panel and Selection List	57/60
Installation Guide for Optional Accessories	61/62
Dimensional Drawing / Marketing Service Network	63/64









High Efficiency High Precision High Stability



Product Features

Product Features of SP Series

High Efficiency--Up to 1.6kW/1U output power, 4kW/2U output power with up to 93% efficiency. High Precision--Up to 0.05% voltage accuracy, up to 0.1% current accuracy and up to 100ms no load voltage drop time and 10ms full load voltage drop time.

High Stability-- Continuable and stable working with temp. 0 to $40\,^{\circ}\text{C}$ in full load voltage for a long time, and has passed ROHS, CSA, UL, CE and FCC approval.

- Accurate voltage and current measurement capability
- Constant Power and wide range of voltage and current output
- Master/Slave parallel and series operation mode for up to 10 units
- Built-in standard automobile electrical test curve
- Support RS232/RS485/LAN/USB/GPIB ports
- OVP/OCP/OPP/OTP/SCP

Product Icon Introduction



(RS232)

LAN

Function of editing List waveform

standard test waveform





FCC certified

10

STORE

CSA certified

"STORE"can store 10 sets data (fast recall after store)

Use SCPI commands, convenient

for cable and circuit breaker test etc.

for quick system integration

Function of editing waveform

Support Short Mode, used

The warranty period is 2 years















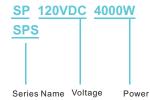
Product Quick Seletion List

DC SP Series

Itam Output Valtage										
			1000W			1600W				4000W
1	20VDC	60A	60A	60A	*	*	*	*	*	*
2	32VDC	50A	50A	50A	*	50A	200A	200A	200A	200A
3	40VDC	40A	40A	40A	*	40A	120A	120A	120A	120A
4	60VDC	25A	25A	25A	25A	*	*	*	*	*
5	75VDC	20A	20A	20A	20A	*	50A	50A	50A	60A
6	80VDC	*	*	*	*	*	*	60A	60A	*
7	120VDC	*	*	*	*	*	40A	40A	40A	40A
8	150VDC	10A	10A	10A	10A	*	30A	30A	30A	30A
9	200VDC	8A	8A	8A	8A	*	24A	24A	24A	24A
10	600VDC	*	*	*	*	*	10A	10A	10A	10A
11	800VDC	*	*	*	*	*	7.5A	7.5A	7.5A	7.5A

Remark: * Not available







Please refer to Product Quick Seletion List



Product Application Field



A. Automobile Sector

Used for automobile electronics product testing, and simulation of the voltage waveform of automobile under different conditions.



B. Household Field C. Communication Sector D. LED Sector

- Used for household products test.
- Used for the tests of communication power supply and electronic devices.
- Used for burn-in test of LEDdriver and LED products.



E.Automatic Testing Sector

Can be integrated in automatic testing system to test electricity parameters, and to supply power to the products under testing.



F.Medical Field

Used for medical device testing or it being integrated in medical



Used for aviation electronic products testing and power supply.



H.Scientific Research Sector

Used in scientific research units, colleges & universities, and certification institutions for laboratory testing























			20VDC-1U
Model	SP20VDC600W	SP20VDC1000W	SP20VDC1200W
Input Voltage/ Frequency	90~265VAC, 47~63Hz		
Power Factor	>0.98		
Output Voltage Range	0~20V		
Output Current Range	0~60A		
Output Power	0~600W	0~1000W	0~1200W
Line Voltage Regulation	0.005%+1mV		
Line Current Regulation	4mA		
Voltage Load Regulation	10mV		
Current Load Regulation	60mA		
Voltage Display Resolution	0.1mV		
Current Display Resolution	0.2mA		
Voltage Setting/ Measurement Accuracy	0.05%+15mV		
Current Setting/ Measurement Accuracy	0.1%+60mA		
Voltage Ripple[1]	40mVp-p/6mVrms		
Current Ripple[1]	60mA(Full Range),20mA(TYP Value)		
Voltage Temperature Coefficient _[2]	100ppm/°C		
Current Temperature Coefficient _[2]	150ppm/°C		
Remote Compensation	4V Max		
Load Transient Response Time	≤2ms		
Command Response Time	50ms		
Efficiency(Full Load)	82.5%	83%	84%
Weight	9.2kg		

[1] Test Condition: Voltage ripple, CV (Constant Voltage) mode-rated output voltage (Vp-p @ 20MHz, Vrms@1.25MHz); Current ripple: CC (Constant Current) mode (Arms @1.25MHz) Current ripple typical value standard: test under full load of rated voltage, at the same time, for full load of the full range voltage, the effective value of the current ripple is

Temperature 0~40°C, Relative Humidity 10%~90% (no condensation)

RS232/RS485/USB/LAN(Standard), GPIB(Optional)

483.0*44.0*531.0 mm

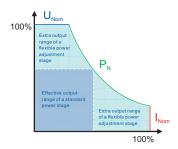
Dimensions(W*H*D)

Operating Environment

Communication Modes

Constant Power Diagrammatic Drawing and Brief Introduction

Wide range output power supply provides wider voltage and current range, one unit function can replace several traditional rectangular power units so as to save cost and space for user; meanwhile, this series power supply can realize diversified operation through front panel, monitoring software or external control to meet various application requirements of the user.



Typical Application of This Power Supply

20V programmable DC power supply could be widely used for charging 12V battery system.

For lead-acid battery, charging current could be 20% of its battery capacity, for li-ion battery, charging current could be 70% of its battery capacity. After charging current is confirmed, you can further choose and confirm the power supply

At present, battery widely adopts 3-stage charging algorithm, the power supply supports switch over between CC (Constant Current) mode and CV (Constant Voltage) mode, the mode could be set flexibly according to the display of power supply's voltage to choose to enter quick charge phase, equalized charge phase or floating charge phase.





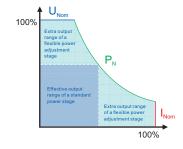
				32 V DC-10
Model	SP32VDC600W	SP32VDC1000W	SP32VDC1200W	SP32VDC1600W
Input Voltage/ Frequency	90~265VAC, 47~63Hz			
Power Factor	>0.98			
Output Voltage Range	0~32V			
Output Current Range	0~50A			
Output Power	0~600W	0~1000W	0~1200W	0~1600W
Line Voltage Regulation	0.005%+1mV			
Line Current Regulation	4mA			
Voltage Load Regulation	10mV			
Current Load Regulation	50mA			
Voltage Display Resolution	0.1mV			
Current Display Resolution	0.2mA			
Voltage Setting/ Measurement Accuracy	0.05%+15mV			
Current Setting/ Measurement Accuracy	0.1%+50mA			
Voltage Ripple[1]	40mVp-p/6mVrms			
Current Ripple[1]	50mA(Full Range),20mA(T	YP Value)		
Voltage Temperature Coefficient(2)	100ppm/°C			
Current Temperature Coefficient(2)	150ppm/°C			
Remote Compensation	4V Max			
Load Transient Response Time	≤2ms			
Command Response Time	50ms			
Efficiency(Full Load)	86%	89%	89%	89%
Weight	9.2kg			
Dimensions(W*H*D)	483.0*44.0*531.0 mm			
Operating Environment	Temperature 0~40°C,Rela	ative Humidity 10%~90%(no	condensation)	
Communication Modes	RS232/RS485/USB/LAN(Standard), GPIB(Optional)		

[1] Test Condition: Voltage ripple, CV (Constant Voltage) mode-rated output voltage (Vp-p @ 20MHz, Vrms@1.25MHz); Current ripple: CC (Constant Current) mode (Arms @1.25MHz) Current ripple typical value standard: test under full load of rated voltage, at the same time, for full load of the full range voltage, the effective value of the current ripple is among the full range voltage standard.

[2] Test Condition: Ambient temperature is among 0~40°C.

Constant Power Diagrammatic Drawing and Brief Introduction

Wide range output power supply provides wider voltage and current range, one unit function can replace several traditional rectangular power units so as to save cost and space for user; meanwhile, this series power supply can realize diversified operation through front panel, monitoring software or external control to meet various application requirements of the user.



32VDC-1U



32VDC-2U

Model	SPS32VDC1000W	SP32VDC2000W	SP32VDC3000W	SP32VDC4000W
Input Voltage/ Frequency	90~265VAC, 47~63Hz	190~265VAC, 47~63Hz	190~265VAC, 47~63Hz	190~265VAC, 47~63Hz
Power Factor	>0.98			
Output Voltage Range	0~32V			
Output Current Range	0~200A			
Output Power	0~1000W	0~2000W	0~3000W	0~4000W
Line Voltage Regulation	0.01%+8mV			
Line Current Regulation	200mA			
Voltage Load Regulation	30mV			
Current Load Regulation	200mA			
Voltage Display Resolution	0.1mV			
Current Display Resolution	1mA			
Voltage Setting/ Measurement Accuracy	0.05%+15mV			
Current Setting/ Measurement Accuracy	0.1%+200mA			
Voltage Ripple[1]	60mVp-p/10mVrms			
Current Ripple[1]	300mA(Full Range),200mA	(TYP Value)		
Voltage Temperature Coefficient _[2]	100ppm/°C			
Current Temperature Coefficient[2]	150ppm/°C			
Remote Compensation	4V Max			
Load Transient Response	≤2ms			
Command Response Time	50ms			
Efficiency(Full Load)	86%	91%	91%	91%
Weight	14.7kg			
Dimensions(W*H*D)	483.0*87.0*626.0 mm			
Operating Environment	Temperature 0~40°C,Rela	ative Humidity 10%~90%(no	condensation)	
Communication Modes	RS232/RS485/USB/LAN(Standard), GPIB(Optional)		

@1.25MHz) Current ripple typical value standard: test under full load of rated voltage, at the same time, for full load of the full range voltage, the effective value of the current ripple among the full range voltage standard. [2] Test Condition: Ambient temperature is among 0~40°C

Typical Application of This Power Supply

32V programmable DC power supply is applicable to electrical equipment testing sector.

To choose this type of power supply, you may take below aspects into consideration:

- 1. High precision voltage output, up to 0.05% voltage accuracy, connect to remote compensation cable in realistic application, to make load voltage is the set voltage.
- 2. Wide range of current, in general, restarting inductive load need current that is much higher than to maintain it operate normally (approximately 3~7 times).
- 3. Convenient for power extension, considering user's sustainable requirement, the power supply could extend voltage, current and power flexibly, master-slave control and current-sharing function could realize above requirement perfectively.









				40VDC-1U
Model	SP40VDC600W	SP40VDC1000W	SP40VDC1200W	SP40VDC1600W
Input Voltage/ Frequency	90~265VAC, 47~63Hz			
Power Factor	>0.98			
Output Voltage Range	0~40V			
Output Current Range	0~40A			
Output Power	0~600W	0~1000W	0~1200W	0~1600W
Line Voltage Regulation	0.005%+1mV			
Line Current Regulation	4mA			
Voltage Load Regulation	10mV			
Current Load Regulation	40mA			
Voltage Display Resolution	0.1mV			
Current Display Resolution	0.2mA			
Voltage Setting/ Measurement Accuracy	0.05%+15mV			
Current Setting/ Measurement Accuracy	0.1%+40mA			
Voltage Ripple[1]	40mVp-p/6mVrms			
Current Ripple[1]	40mA(Full Range),20mA(T	YP Value)		
Voltage Temperature Coefficient[2]	100ppm/°C			
Current Temperature Coefficient _[2]	150ppm/°C			
Remote Compensation	4V Max			
Load Transient Response Time	≤2ms			
Command Response Time	50ms			
Efficiency(Full Load)	87%	89%	89%	90%
Woight	9.2kg			

[1] Test Condition: Voltage ripple, CV (Constant Voltage) mode-rated output voltage (Vp-p @ 20MHz, Vrms@1.25MHz); Current ripple: CC (Constant Current) mode (Arms @1.25MHz) Current ripple typical value standard: test under full load of rated voltage, at the same time, for full load of the full range voltage, the effective value of the current ripple is among the full range voltage standard.

Temperature 0~40°C, Relative Humidity 10%~90% (no condensation)

RS232/RS485/USB/LAN(Standard), GPIB(Optional)

[2] Test Condition: Ambient temperature is among 0~40°C.

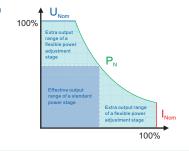
Dimensions(W*H*D)

Operating Environment Communication Modes

Constant Power Diagrammatic Drawing and Brief Introduction

483.0*44.0*531.0 mm

Wide range output power supply provides wider voltage and current range, one unit function can replace several traditional rectangular power units so as to save cost and space for user; meanwhile, this series power supply can realize diversified operation through front panel, monitoring software or external control to meet various application requirements of the user.





40VDC-2U

				100000
Model	SPS40VDC1000W	SP40VDC2000W	SP40VDC3000W	SP40VDC4000W
Input Voltage/ Frequency	90~265VAC, 47~63Hz	190~265VAC, 47~63Hz		
Power Factor	>0.98			>0.99
Output Voltage Range	0~40V			
Output Current Range	0~120A			
Output Power	0~1000W	0~2000W	0~3000W	0~4000W
Line Voltage Regulation	0.02%+8mV	0.01%+8mV		
Line Current Regulation	30mA			
Voltage Load Regulation	15mV			
Current Load Regulation	120mA			
Voltage Display Resolution	0.1mV			
Current Display Resolution	1mA			
Voltage Setting/ Measurement Accuracy	0.05%+15mV			
Current Setting/ Measurement Accuracy	0.1%+120mA			
Voltage Ripple[1]	40mVp-p/6mVrms			
Current Ripple[1]	150mA(Full Range),20mA(TYP Value)		
Voltage Temperature Coefficient(2)	100ppm/°C			
Current Temperature Coefficient[2]	150ppm/°C			
Remote Compensation	4V Max			
Load Transient Response	≤2ms			
Command Response Time	50ms			
Efficiency(Full Load)	87%	88%	88%	91%
Weight	14.7kg			
Dimensions(W*H*D)	483.0*87.0*626.0 mm			
Operating Environment	Temperature 0~40°C,Rela	itive Humidity 10%~90%(no	condensation)	
Communication Modes	RS232/RS485/USB/LAN(Standard), GPIB(Optional)		

@1.25MHz) Current ripple typical value standard: test under full load of rated voltage, at the same time, for full load of the full range voltage, the effective value of the current ripple among the full range voltage standard. [2] Test Condition: Ambient temperature is among 0~40°C

Typical Application of This Power Supply

40V programmable DC power supply is applicable to cable/circuit breaker testing sector.

To protect user's devices and the power supply itself, protection functions of OVP, OCP, OPP etc. could be started according to the requirement, SCP function defaults to ON.

Testing the current-carrying capability of cable or circuit breaker, to some degree, means to set power supply to short circuit mode, if power supply send out alarm constantly, normal test will not be realized, therefore, SHORT MODE is added in the menu for this application, set the SHORT MODE to OFF when testing cable or circuit breaker, then the test could be proceeded smoothly.





DC SP Series-60VDC



60VDC Product







Measurement Accuracy

Remote Compensation

Dimensions(W*H*D)

Operating Environment

Communication Modes

Load Transient Response Time

Voltage Ripple[1

Current Ripple[1] Voltage Temperature

















[1] Test Condition: Voltage ripple, CV (Constant Voltage) mode-rated output voltage (Vp-p @ 20MHz, Vrms@1.25MHz); Current ripple: CC (Constant Current) mode (Arms @1.25MHz) Current ripple typical value standard: test under full load of rated voltage, at the same time, for full load of the full range voltage, the effective value of the current ripple is among the full range voltage standard.

90%

89%

RS232/RS485/USB/LAN(Standard), GPIB(Optional)

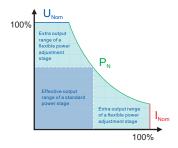
Temperature 0~40°C, Relative Humidity 10%~90% (no condensation)

≤1.5ms

91%

Constant Power Diagrammatic Drawing and Brief Introduction

Wide range output power supply provides wider voltage and current range, one unit function can replace several traditional rectangular power units so as to save cost and space for user; meanwhile, this series power supply can realize diversified operation through front panel, monitoring software or external control to meet various application requirements of the user.



Typical Application of This Power Supply

60V programmable DC power supply could be widely used for charging 48V battery system.

For lead-acid battery, charging current could be 20% of its battery capacity, for li-ion battery, charging current could be 70% of its battery capacity. After charging current is confirmed, you can further choose and confirm the power supply

At present, battery widely adopts 3-stage charging algorithm, the power supply supports switch over between CC (Constant Current) mode and CV (Constant Voltage) mode, the mode could be set flexibly according to the display of power supply's voltage to choose to enter quick charge phase, equalized charge phase or floating charge phase.



40mVp-p/6mVrms

100ppm/°C

150ppm/°C

4V Max

≤2ms

50ms 88%

8.9kg

483.0*44.0*531.0 mm

25mA(Full Range),10mA(TYP Value)

(\$\)\$\(\)\$





				75VDC-1U
Model	SP75VDC600W	SP75VDC1000W	SP75VDC1200W	SP75VDC1500W
Input Voltage/ Frequency	90~265VAC, 47~63Hz			
Power Factor	>0.98			
Output Voltage Range	0~75V			
Output Current Range	0~20A			
Output Power	0~600W	0~1000W	0~1200W	0~1500W
Line Voltage Regulation	0.005%+1mV			
Line Current Regulation	4mA			
Voltage Load Regulation	10mV			
Current Load Regulation	20mA			
Voltage Display Resolution	0.1mV			
Current Display Resolution	0.2mA			
Voltage Setting/ Measurement Accuracy	0.05%+15mV			
Current Setting/ Measurement Accuracy	0.1%+20mA			
Voltage Ripple[1]	40mVp-p/6mVrms			
Current Ripple[1]	20mA(Full Range),10mA(T	YP Value)		
Voltage Temperature Coefficient _[2]	100ppm/°C			
Current Temperature Coefficient _[2]	150ppm/°C			
Remote Compensation	4V Max			
Load Transient Response Time	≤2ms			≤1.5ms
Command Response Time	50ms			
Efficiency(Full Load)	88%	89%	90%	91%
Weight	8.9kg			
Dimensions(W*H*D)	483.0*44.0*531.0 mm			
Operating Environment	Temperature 0~40°C,Rela	tive Humidity 10%~90%(no	condensation)	

[1] Test Condition: Voltage ripple, CV (Constant Voltage) mode-rated output voltage (Vp-p @ 20MHz, Vrms@1.25MHz); Current ripple: CC (Constant Current) mode (Arms @1.25MHz) Current ripple typical value standard: test under full load of rated voltage, at the same time, for full load of the full range voltage, the effective value of the current ripple is among the full range voltage standard.

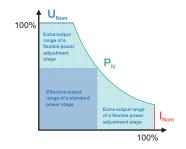
[2] Test Condition: Ambient temperature is among 0~40°C.

Communication Modes

Constant Power Diagrammatic Drawing and Brief Introduction

RS232/RS485/USB/LAN(Standard), GPIB(Optional)

Wide range output power supply provides wider voltage and current range, one unit function can replace several traditional rectangular power units so as to save cost and space for user; meanwhile, this series power supply can realize diversified operation through front panel, monitoring software or external control to meet various application requirements of the user.





75VDC-2U

Model	SPS75VDC1000W	SP75VDC2000W	SP75VDC3000W	SP75VDC4000W
Input Voltage/ Frequency	90~265VAC, 47~63Hz	190~265VAC, 47~63Hz		
Power Factor	>0.98			>0.99
Output Voltage Range	0~75V			
Output Current Range	0~50A			0~60A
Output Power	0~1000W	0~2000W	0~3000W	0~4000W
Line Voltage Regulation	0.02%+8mV	0.01%+8mV		
Line Current Regulation	30mA			
Voltage Load Regulation	15mV			
Current Load Regulation	50mA	50mA	50mA	60mA
Voltage Display Resolution	0.1mV			
Current Display Resolution	0.1mA			
Voltage Setting/ Measurement Accuracy	0.05%+15mV			
Current Setting/ Measurement Accuracy	0.1%+50mA	0.1%+50mA	0.1%+50mA	0.1%+60mA
Voltage Ripple[1]	40mVp-p/6mVrms			40mVp-p/8mVrms
Current Ripple[1]	50mA(Full Range),10mA(T	YP Value)		60mA(Full Range) 10mA(TYP Value)
Voltage Temperature Coefficient _[2]	100ppm/°C			,
Current Temperature Coefficient _[2]	150ppm/°C			
Remote Compensation	5V Max	4V Max	4V Max	5V Max
Load Transient Response Time	≤2ms			
Command Response Time	50ms			
Efficiency(Full Load)	88%	88%	91%	91%
Weight	13.2kg			
Dimensions(W*H*D)	483.0*87.0*581.0 mm			
Operating Environment	Temperature 0~40°C,Rela	tive Humidity 10%~90%(no	condensation)	
Communication Modes	RS232/RS485/USB/LAN(S	Standard), GPIB(Optional)		

@1.25MHz) Current ripple typical value standard: test under full load of rated voltage, at the same time, for full load of the full range voltage, the effective value of the current ripple among the full range voltage standard.

[2] Test Condition: Ambient temperature is among 0~40°C

Typical Application of This Power Supply

75V programmable DC power supply is applicable to activation of some electronic devices in military field.

The application requires the power supply take time as standard, under CC (constant current) mode, adjust power setting of current-limiting to activate these electronic devices.

When using this function, List function is applicable to edit parameters that is needed for test, if power supply is integrated in the system, SCPI instruct can be used to control it remotely. Both operations could content client very well.



SCPI



80VDC-2U

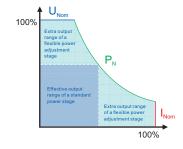
	Model	SP80VDC2000W	SP80VDC3000W
	Input Voltage/ Frequency	190~265VAC, 47~63Hz	
7)	Power Factor	>0.98	
	Output Voltage Range	0~80V	
91	Output Current Range	0~60A	
۱,	Output Power	0~2000W	0~3000W
2)	Line Voltage Regulation	0.01%+8mV	
5)	Line Current Regulation	30mA	
	Voltage Load Regulation	15mV	
)	Current Load Regulation	60mA	
7	Voltage Display Resolution	0.1mV	
4	Current Display Resolution	0.1mA	
•)∣	Voltage Setting/ Measurement Accuracy	0.05%+15mV	
	Current Setting/ Measurement Accuracy	0.1%+60mA	
"	Voltage Ripple[1]	40mVp-p/6mVrms	
١	Current Ripple[1]	50mA(Full Range),10mA(TYP Value)	
4	Voltage Temperature Coefficient _[2]	100ppm/°C	
)	Current Temperature Coefficient _[2]	150ppm/°C	
	Remote Compensation	4V Max	
	Load Transient Response Time	≤2ms	
)	Command Response Time	50ms	
٠	Efficiency(Full Load)	89%	91%
	Weight	13.2kg	
!	Dimensions(W*H*D)	483.0*87.0*581.0 mm	
	Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90% (no c	condensation)
8	Communication Modes	RS232/RS485/USB/LAN(Standard), GPIB(Optional)	

[1] Test Condition: Voltage ripple, CV (Constant Voltage) mode-rated output voltage (Vp-p @ 20MHz, Vrms@1.25MHz); Current ripple: CC (Constant Current) mode (Arms @1.25MHz) Current ripple typical value standard: test under full load of rated voltage, at the same time, for full load of the full range voltage, the effective value of the current ripple is among the full range voltage standard.

[2] Test Condition: Ambient temperature is among 0~40°C.

Constant Power Diagrammatic Drawing and Brief Introduction

Wide range output power supply provides wider voltage and current range, one unit function can replace several traditional rectangular power units so as to save cost and space for user; meanwhile, this series power supply can realize diversified operation through front panel, monitoring software or external control to meet various application requirements of the user





120VDC-2U

20VDC

Model	SPS120VDC1000W	SP120VDC2000W	SP120VDC3000W	SP120VDC4000W
Input Voltage/ Frequency	90~265VAC, 47~63Hz	190~265VAC, 47~63Hz		
Power Factor	>0.98			
Output Voltage Range	0~120V			
Output Current Range	0~40A			
Output Power	0~1000W	0~2000W	0~3000W	0~4000W
Line Voltage Regulation	0.02%+8mV			
Line Current Regulation	40mA	30mA		
Voltage Load Regulation	15mV			
Current Load Regulation	40mA			
Voltage Display Resolution	1mV			
Current Display Resolution	0.1mA			
Voltage Setting/ Measurement Accuracy	0.1%+15mV			
Current Setting/ Measurement Accuracy	0.1%+40mA			
Voltage Ripple[1]	80mVp-p/15mVrms			
Current Ripple[1]	60mA(Full Range),10mA(T	YP Value)		
Voltage Temperature Coefficient _[2]	100ppm/°C			
Current Temperature Coefficient(2)	150ppm/°C			
Remote Compensation	5V Max			
Load Transient Response	≤2ms	≤3ms	≤2ms	≤2ms
Command Response Time	50ms			
Efficiency(Full Load)	88%	89%	91%	92%
Weight	13.2kg			
Dimensions(W*H*D)	483.0*87.0*581.0 mm			
Operating Environment	Temperature 0~40°C,Rela	tive Humidity 10%~90%(no	condensation)	
Communication Modes	RS232/RS485/USB/LAN(S	Standard), GPIB(Optional)		

@1.25MHz) Current ripple typical value standard: test under full load of rated voltage, at the same time, for full load of the full range voltage, the effective value of the current ripple among the full range voltage standard. [2] Test Condition: Ambient temperature is among 0~40°C

Typical Application of This Power Supply

80V programmable DC power supply is applicable to automobile electronics product testing sector.

Built-in 12V DIN40839 automobile starting voltage waveform, be able to simulate automobile engine electronic performance test; Meanwhile, built-in 12V ISO-16750-2 engine start test waveform enable simulation of voltage drop test waveform and restoration function test waveform of automobile electronic. This function save the tedious editing process before test, test engineer could adjust the set parameter of waveform so as to realize the output of waveform under different test level

120V programmable DC power supply is widely used in automatic testing sector.

The average conversion efficiency of 120VDC programmable power supply is 90%, its load regulation is low, which ensure stable output when the load is changing constantly; Standard RS232/RS485/USB/LAN interface and GPIB is optional, which not only provide more flexibility but also have your test system adapt future requirement; Meanwhile, the power supply supports standard SCPI communication protocol, which is convenient for user's secondary development.





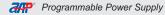
















150VDC-1U

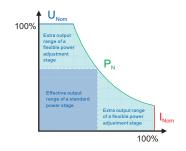
	Model	SP150VDC600W	SP150VDC1000W	SP150VDC1200W	SP150VDC1500W
	Input Voltage/ Frequency	90~265VAC, 47~63Hz			
١	Power Factor	>0.98			
	Output Voltage Range	0~150V			
)	Output Current Range	0~10A			
ιl	Output Power	0~600W	0~1000W	0~1200W	0~1500W
'	Line Voltage Regulation	0.02%+8mV			
)	Line Current Regulation	10mA			
	Voltage Load Regulation	15mV			
)	Current Load Regulation	10mA			
١l	Voltage Display Resolution	1mV			
'	Current Display Resolution	0.2mA			
)	Voltage Setting/ Measurement Accuracy	0.1%+15mV			
	Current Setting/ Measurement Accuracy	0.1%+10mA			
	Voltage Ripple[1]	120mVp-p/40mVrms			
١١	Current Ripple[1]	40mA(Full Range),10mA(T	YP Value)		
'	Voltage Temperature Coefficient _[2]	100ppm/°C			
)	Current Temperature Coefficient _[2]	150ppm/°C			
	Remote Compensation	4V Max			
	Load Transient Response Time	≤2ms			
)	Command Response Time	50ms			
	Efficiency(Full Load)	88%	89%	89%	90%
	Weight	9.3kg			
	Dimensions(W*H*D)	483.0*44.0*531.0 mm			
1	Operating Environment	Temperature 0~40°C,Rela	tive Humidity 10%~90%(no	condensation)	
	Communication Modes	RS232/RS485/USB/LAN(S	Standard), GPIB(Optional)		

[1] Test Condition: Voltage ripple, CV (Constant Voltage) mode-rated output voltage (Vp-p @ 20MHz, Vrms@1 25MHz): Current ripple: CC (Constant Current) mode (Arms @ 1.25MHz) Current ripple typical value standard: test under full load of rated voltage, at the same time, for full load of the full range voltage, the effective value of the current ripple is among the full range voltage standard.

[2] Test Condition: Ambient temperature is among 0~40°C.

Constant Power Diagrammatic Drawing and Brief Introduction

Wide range output power supply provides wider voltage and current range, one unit function can replace several traditional rectangular power units so as to save cost and space for user; meanwhile, this series power supply can realize diversified operation through front panel, monitoring software or external control to meet various application requirements of the user.





150VDC-2U

				130120 20	
Model	SPS150VDC1000W	SP150VDC2000W	SP150VDC3000W	SP150VDC4000W	
Input Voltage/ Frequency	90~265VAC, 47~63Hz	190~265VAC, 47~63Hz			
Power Factor	>0.98				
Output Voltage Range	0~150V				
Output Current Range	0~30A				
Output Power	0~1000W	0~2000W	0~3000W	0~4000W	
Line Voltage Regulation	0.02%+8mV				
Line Current Regulation	30mA				
Voltage Load Regulation	15mV				
Current Load Regulation	30mA				
Voltage Display Resolution	1mV				
Current Display Resolution	0.1mA				
Voltage Setting/ Measurement Accuracy	0.1%+15mV				
Current Setting/ Measurement Accuracy	0.1%+30mA				
Voltage Ripple[1]	80mVp-p/15mVrms				
Current Ripple[1]	60mA(Full Range),10mA(T	YP Value)			
Voltage Temperature Coefficient _[2]	100ppm/°C				
Current Temperature Coefficient(2)	150ppm/°C				
Remote Compensation	5V Max				
Load Transient Response	≤2ms	≤3ms	≤2.5ms	≤2.5ms	
Command Response Time	50ms				
Efficiency(Full Load)	88%	90%	92%	93%	
Weight	13.2kg				
Dimensions(W*H*D)	483.0*87.0*581.0 mm				
Operating Environment	Temperature 0~40°C,Relative Humidity 10%~90%(no condensation)				
Communication Modes	RS232/RS485/USB/LAN(Standard), GPIB(Optional)				

[7] Itse Colonion. Assign rippe. Or Constant. Consign index reason only index reason on the full range voltage standard.

21 Test Condition. Ambient temperature is among 0~40°C.

Typical Application of This Power Supply

150V programmable DC power supply is widely used in automatic testing sector.

The average conversion efficiency of 150VDC programmable power supply is 90%, its load regulation is low, which ensure stable output when the load is changing constantly; Standard RS232/RS485/USB/LAN interface and GPIB is optional, which not only provide more flexibility but also have your test system adapt future requirement; Meanwhile, the power supply support standard SCPI communication protocol, which is convenient for user's secondary development.





























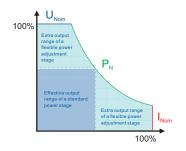
	Model	SP200VDC600W	SP200VDC1000W	SP200VDC1200W	SP200VDC1500W	
	Input Voltage/ Frequency	90~265VAC, 47~63Hz				
١	Power Factor	>0.98				
	Output Voltage Range	0~200V				
1	Output Current Range	0~8A				
١l	Output Power	0~600W	0~1000W	0~1200W	0~1500W	
'	Line Voltage Regulation	0.02%+8mV				
١	Line Current Regulation	30mA				
	Voltage Load Regulation	15mV				
۱ ا	Current Load Regulation	8mA				
١l	Voltage Display Resolution	1mV				
1	Current Display Resolution	0.1mA				
)	Voltage Setting/ Measurement Accuracy	0.1%+15mV				
	Current Setting/ Measurement Accuracy	0.1%+8mA				
۱'	Voltage Ripple[1]	120mVp-p/40mVrms				
١	Current Ripple[1]	40mA(Full Range),10mA(T	YP Value)			
	Voltage Temperature Coefficient _[2]	100ppm/°C				
1	Current Temperature Coefficient _[2]	150ppm/°C				
	Remote Compensation	4V Max				
	Load Transient Response Time	≤3ms				
۱ (Command Response Time	50ms				
	Efficiency(Full Load)	87%	87%	90%	91%	
	Weight	9.3kg				
	Dimensions(W*H*D)	483.0*44.0*531.0 mm				
	Operating Environment	Temperature 0~40°c,Relative Humidity 10%~90%(no condensation)				
	Communication Modes	RS232/RS485/USB/LAN(Standard), GPIB(Optional)				

[1] Test Condition: Voltage ripple, CV (Constant Voltage) mode-rated output voltage (Vp-p @ 20MHz, Vrms@1.25MHz); Current ripple: CC (Constant Current) mode (Arms @1.25MHz) Current ripple typical value standard: test under full load of rated voltage, at the same time, for full load of the full range voltage, the effective value of the current ripple is among the full range voltage standard.

[2] Test Condition: Ambient temperature is among 0~40°C.

Constant Power Diagrammatic Drawing and Brief Introduction

Wide range output power supply provides wider voltage and current range, one unit function can replace several traditional rectangular power units so as to save cost and space for user; meanwhile, this series power supply can realize diversified operation through front panel, monitoring software or external control to meet various application requirements of the user.



200VDC-1U



200VDC-2U

Model	SPS200VDC1000W	SP200VDC2000W	SP200VDC3000W	SP200VDC4000W	
Input Voltage/ Frequency	90~265VAC,47~63Hz	190~265VAC, 47~63Hz			
Power Factor	>0.98				
Output Voltage Range	0~200V				
Output Current Range	0~24A				
Output Power	0~1000W	0~2000W	0~3000W	0~4000W	
Line Voltage Regulation	0.02%+8mV				
Line Current Regulation	30mA				
Voltage Load Regulation	15mV			25mV	
Current Load Regulation	24mA				
Voltage Display Resolution	1mV				
Current Display Resolution	0.1mA				
Voltage Setting/ Measurement Accuracy	0.1%+15mV				
Current Setting/ Measurement Accuracy	0.1%+24mA				
Voltage Ripple[1]	150mVp-p/30mVrms				
Current Ripple[1]	50mA(Full Range),20mA(TYP Value)				
Voltage Temperature Coefficient _[2]	100ppm/°C				
Current Temperature Coefficient[2]	150ppm/°C				
Remote Compensation	5V Max				
Load Transient Response	≤2ms	≼3ms	≼3ms	≼3ms	
Command Response Time	50ms				
Efficiency(Full Load)	88%	90%	91%	92%	
Weight	13.2kg				
Dimensions(W*H*D)	483.0*87.0*581.0 mm				
Operating Environment	Temperature 0~40°C,Relative Humidity 10%~90%(no condensation)				
Communication Modes	RS232/RS485/USB/LAN(Standard), GPIB(Optional)				

@1.25MHz) Current ripple typical value standard: test under full load of rated voltage, at the same time, for full load of the full range voltage, the effective value of the current ripple among the full range voltage standard. [2] Test Condition: Ambient temperature is among 0~40°C

Typical Application of This Power Supply

200V programmable DC power supply is widely used in automatic testing sector.

The average conversion efficiency of 200VDC programmable power supply is 90%, its load regulation is low, which ensure stable output when the load is changing constantly; Standard RS232/RS485/USB/LAN interface and GPIB is optional, which not only provide more flexibility but also have your test system adapt future requirement; Meanwhile, the power supply support standard SCPI communication protocol, which is convenient for user's secondary development.



600VDC-2U

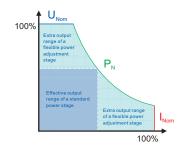
	Model	SPS600VDC1000W	SP600VDC2000W	SP600VDC3000W	SP600VDC4000W
•	Input Voltage/ Frequency	90~265VAC, 47~63Hz	190~265VAC, 47~63Hz		
7) [Power Factor	>0.98			
$\langle $	Output Voltage Range	0~600V			
91	Output Current Range	0~10A			
7	Output Power	0~1000W	0~2000W	0~3000W	0~4000W
2)	Line Voltage Regulation	0.01%+30mV			
5)	Line Current Regulation	15mA			
$\langle $	Voltage Load Regulation	30mV			
) (Current Load Regulation	10mA			
) [Voltage Display Resolution	1mV			
7	Current Display Resolution	0.1mA			
P) [Voltage Setting/ Measurement Accuracy	0.1%+150mV			
$\langle $	Current Setting/ Measurement Accuracy	0.1%+10mA			
9	Voltage Ripple[1]	350mVp-p/40mVrms			
۱۴	Current Ripple[1]	25mA(Full Range),10mA(T	YP Value)		
7	Voltage Temperature Coefficient _[2]	100ppm/°C			
)	Current Temperature Coefficient _[2]	150ppm/°C			
	Remote Compensation	5V Max			
	Load Transient Response Time	≼3ms			
)	Command Response Time	50ms			
٠	Efficiency(Full Load)	86%	90%	91%	92%
	Weight	14.7kg			
!	Dimensions(W*H*D)	483.0*87.0*626.0 mm			
D [Operating Environment	Temperature 0~40°C,Rela	tive Humidity 10%~90%(no	condensation)	
8	Communication Modes	RS232/RS485/USB/LAN(S	Standard), GPIB(Optional)		

[1] Test Condition: Voltage ripple, CV (Constant Voltage) mode-rated output voltage (Vp-p @ 20MHz, Vrms@1.25MHz); Current ripple: CC (Constant Current) mode (Arms @1.25MHz) Current ripple typical value standard: test under full load of rated voltage, at the same time, for full load of the full range voltage, the effective value of the current ripple is among the full range voltage standard.

[2] Test Condition: Ambient temperature is among 0~40°C.

Constant Power Diagrammatic Drawing and Brief Introduction

Wide range output power supply provides wider voltage and current range, one unit function can replace several traditional rectangular power units so as to save cost and space for user; meanwhile, this series power supply can realize diversified operation through front panel, monitoring software or external control to meet various application requirements of the user.





800VDC

				800VDC-2U
Model	SPS800VDC1000W	SP800VDC2000W	SP800VDC3000W	SP800VDC4000W
nput Voltage/ Frequency	90~265VAC, 47~63Hz	190~265VAC, 47~63Hz		
Power Factor	>0.98			
Output Voltage Range	0~800V			
Output Current Range	0~7.5A			
Output Power	0~1000W	0~2000W	0~3000W	0~4000W
Line Voltage Regulation	0.01%+40mV			
Line Current Regulation	20mA			
Voltage Load Regulation	200mV			
Current Load Regulation	20mA			
Voltage Display Resolution	1mV			
Current Display Resolution	0.1mA			
Voltage Setting/ Measurement Accuracy	0.05%+200mV			
Current Setting/ Measurement Accuracy	0.1%+7.5mA			
Voltage Ripple[1]	800mVp-p/200mVrms			
Current Ripple[1]	25mA(Full Range),10mA(T	YP Value)		
Voltage Temperature Coefficient _[2]	100ppm/°C			
Current Temperature	150ppm/°C			
Remote Compensation	5V Max			
Load Transient Response	≼3ms			
Command Response	50ms			
Efficiency(Full Load)	85%	91%	91%	92%
Weight	14.7kg			
Dimensions(W*H*D)	483.0*87.0*626.0 mm			
Operating Environment	Temperature 0~40°C,Rela	tive Humidity 10%~90%(no	condensation)	
Communication Modes	RS232/RS485/USB/LAN(Standard), GPIB(Optional)			

@1.25MHz) Current ripple typical value standard: test under full load of rated voltage, at the same time, for full load of the full range voltage, the effective value of the current ripple is among the full range voltage standard. [2] Test Condition: Ambient temperature is among 0~40°C

Typical Application of This Power Supply

600V/800V programmable DC power supply is widely used in automatic testing sector.

The average conversion efficiency of 600VDC programmable power supply is 90%, its load regulation is low, which ensure stable output when the load is changing constantly; Standard RS232/RS485/USB/LAN interface and GPIB is optional, which not only provide more flexibility but also have your test system adapt future requirement; Meanwhile, the power supply support standard SCPI communication protocol, which is convenient for user's secondary development.





Programmable Power Supply

SP Series Front Panel Introduction



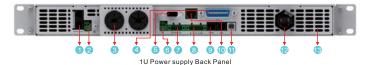
1U Power supply Front Panel

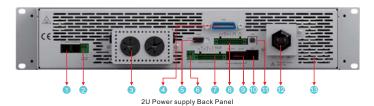


2U Power supply Front Panel

Key	Introduction	
0~9	Numeric Key	
0	Decimal Point	
es	Escape	
Δ	UP, used for choose menu or increase set value in menu operation	
▽	DOWN, used for choose menu or decrease set value in menu operation	
Enter	Enter	
V-set	Set power supply's output voltage value	
Set power supply's output current-limiting value		
Display	Press it to back to the main interface quickly	
nonom	Control ON/OFF of power supply	
Menu	Menu	
Shift	Work with functional keys to realize multifunction	
LOCAL	Panel operation	
RECALL	Recall stored setting value of power supply from internal storage	
STORE	Store current settings of power supply to storage location	
DVM/POWER	Display DVM value and power value	

SP Series Back Panel Introduction

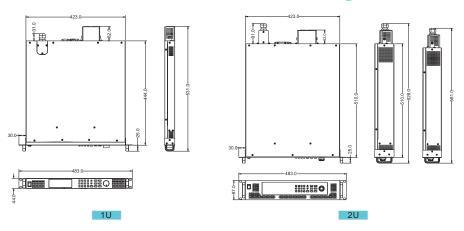




- AVG1/AVG2 Connector, used for connecting between units to enable current sharing.
- Voltage Remote Supporting Connector (VOLTAGE SENSING): Used to support wire voltage drops.
- DC output terminal: Left (-), Right (+).
- GPIB Communication connector.
- RS-232 Communication connector.
- 6 DVM Connector.
- ANALONG INTERFACE signal connection terminal.
- RS-485 Communication connector.
- SYSTEM BUS control, used for transmission of master and slaves.
- LAN Communication Interface.
- USB Communication Interface.
- AC Power Connection terminal.
- The fan duct outlet.



SP Series Outline Dimension Drawing (unit: mm)



Remark: Dimension of 20VDC, 30VDC, 40VDC 2U products: 483.0*87.0*626.0 mm

Dimension of 75VDC, 80VDC, 120VDC, 150VDC, 200VDC 2U products: 483.0*87.0*626.0 mm

Power Supply Monitoring Software

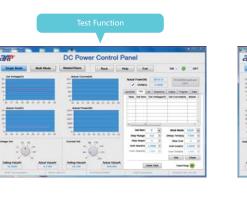
DC Power Control Panel (SP Series)

DC Power Control Panel are self-developed supervisory software on programmable DC power from APM Technologies that are applicable for 1U/2U SP series power. This monitoring software nearly covers all the functions of front panel operation, thus enable the user to remotely monitor the device on a PC in an efficient & convenient way. Base on the PC's external power connection condition, switchover to the Single Mode interface, Master/Slave interface, and Multi Mode interface can be performed easily.

APM Technologies' programmable DC power supply is equipped with a variety of common communication interface such as the USB/LAN/RS485/RS232 in order to provide more options based on customer actual requirements.

















Programmable Power Supply **Application Case**

Application Case

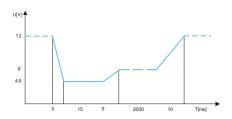
Automobile Electronic Products Impulse Testing

One of the leading automotive electronics product manufactures has used APM Technologies' SP series programmable DC power supply to perform impulse testing on their electronics products to verify the reliability and stability.

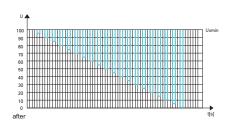
Our products can meet clients' requirement and complete products' function test solution very well. Programmable power supply developed by APM Technologies contains frequently used test waveform which complies with standards of Automobile Electronic Field. This function save the tedious editing process before test, test engineer could adjust the set parameter of waveform so as to output waveforms under different test level.



This test waveform is strict in voltage increasing and decreasing of Power, APM Technologies can totally meet the requirement since they got the related item patents.



Standard: DIN40839 Test Item: Automobile Electronic Engine Start Test



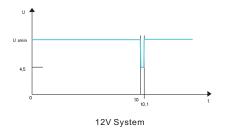
Standard: ISO16750-2

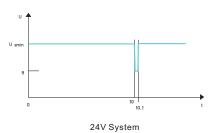
Test Item: Automobile Electronic Restoration Function Test

This test waveform is used for simulating the impact of Electronics when the fuses of Automobile circuit break, the voltages of other circuits drop instantaneously.

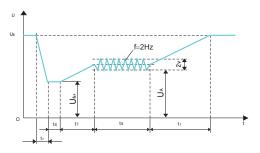
Standard: ISO16750-2

Test Item: Instantaneous Interrupt Test





This test waveform is similar to that of DIN40839 Standard, the mid-part add waveform component test, which more truly simulates the Engine Start Test.



Standard: ISO16750-2

Test Item: Automobile Electronic Engine Start Test

Test Systems

- Audio amplifier test system
- Cash register main panel test system
- LED driving power function system
- Ballast and LED driving power burn-in test system
- Transducer control panel and driver board test system
- Electronic welding machine control board and power strip function test system

1. UPS Power Supply Test System





2. Power Supply Test System

- Adapter
- Charger
- LED Power Supply

- PC Power Supply
- Power Inverter
- Communication Power Supply



SP60VDC1000W type is used for DC-DC charger/ module test system, the whole system needs DC power supply, electronic load, dynamometer, and oscilloscope etc., connect to IPC (Industrial Personal Computer) through communication interfaces, apply monitoring software to realize automatic testing; In the system, programmable power supply developed by APM Technologies provides DC power to DC-DC charger and module under testing, various data could be tested only after power is supplied, meanwhile, the input & output voltage and current of DC-DC charger/ module could be tested precisely; At the same time, transient voltage, rise & fall waveform, current measurement under rated voltage mode etc. could be tested.

SP75VDC1500W type is used for adapter test system, the whole system needs DC power supply, electronic load, dynamometer, and oscilloscope etc., connect to IPC (Industrial Personal Computer) through communication interfaces, apply monitoring software to realize automatic testing; In the system, programmable power supply developed by APM Technologies could test the output voltage and current of adapter precisely; At the same time, transient voltage, rise & fall waveform, current measurement under rated voltage mode etc. could be tested.

3. PCBA Test

Use SP75VDC1500W type to test electrical parameter between each point in the PCB-board through test fixture and coordinate with software operation. Clients use this type for production line test, six sets output: 5V / 0.5A, 10.7V/ 0.5A, 28V / 6A, 30V / 0.5A, 36V / 6A, 48V / 15A are needed and rapid switchover of required voltage & current is requested to improve the production line efficiency and facilitate operator's usage. For this, programmable power supply developed by APM Technologies provides fast call function, which enable operator to output a set of required voltage & current with one key.



4. DC Fan Test System

Use SP32VDC1000W type for DC fan test system; Programmable power supply developed by APM Technologies provides power to DC fan under testing.





5. Multimedia Test System

