

Infosteraluna

Top instrument provider

SP600/900

Small and Medium Power
Programmable DC Source



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SP600/900 series

Small and Medium Power Programmable DC Source

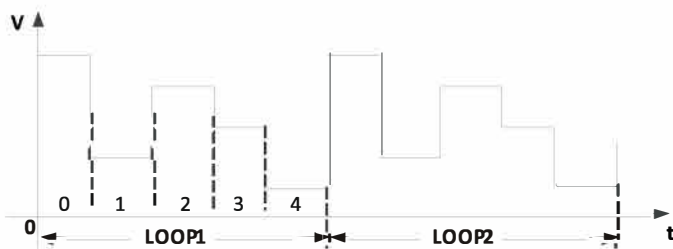


Features

- Output Power:600W/900W;
- Output Voltage:0~600V;
- Output current:0~60A;
- Small size,1U/half 19 inch;
- Input high Power factor,low harmonic;
- Sequence and waveform editing function;
- Equipped with battery charging function;
- Comprehensive protection function for over voltage,over current,over power,over temperature;
- Support to set output time,can control and record output time;
- Support Voltage compensation remotely;
- OLED display, wide viewing angle,high brightness;
- Standard RS232 and LAN, optional RS485;
- Support standard SCPI and Modbus-RTU communication protocol.

Sequence function

In the sequence output mode, complex output changes can be simulated based on user edited sequence parameters.Sequence output function, with menu option "SEQ", allow user to edit voltage and current waveform themselves.



Output waveform for sequence testing

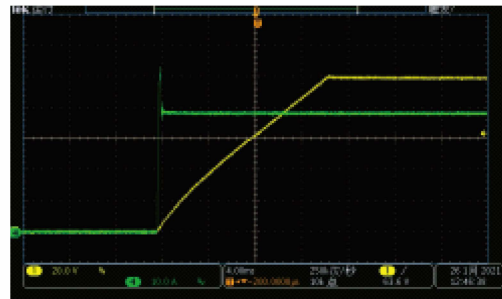
SP600/900 series provide 10 sequence files, each supporting up to 100 running steps.It can be set the voltage setting,current setting and runtime in running step.Support "Cycle numbers"and "Link file",The cycle numbers can control sequence cycle running numbers,set 0 in infinite loop.The Link files can be used to run links between different files,set 0 to indicate no link.

General

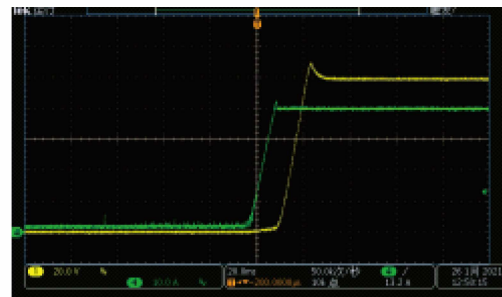
The SP600/900 series is a small volume, high performance and high power density programmable DC source.The 1 U and a half 19 inch design makes the single device more lightweight and the cabinet integration more convenient.The maximum output power 900W,it can be applied in different fields such as laboratory testing, system integration, and large-scale production line testing.

CV、CC priority

When the power output is connected to an inductive or capacitive load, it can cause a certain degree of overshoot in the output current or voltage. In mild cases it can trigger the protection of the tested equipment, and in severe cases it can directly cause damage to the tested equipment.The SP600/900 series have CV and CC output priority functions,it can suppress output overshoot effectively and its impact.



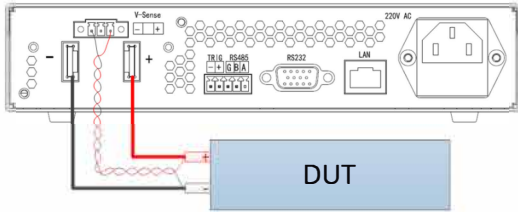
CV priority (high speed built
Overshoot of Voltage> Current)



CC priority(high speed built
Overshoot of Current,Voltage)

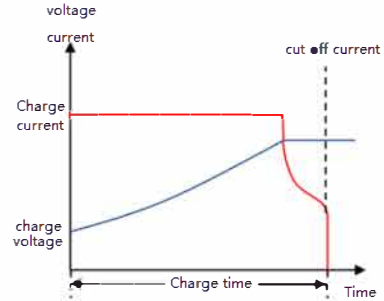
Remote sensing function

A voltage drop will be occurred on the connection line between the power supply and the load terminal when the load consumes high current, then remote sensing can automatically compensate for the voltage drop on the load line.the wiring diagram as below:



Battery charge function

SP600/900 series provide battery charge function,can define charge voltage、charge current、charge cut off voltage、charge cut off current、charge cut off capacity、charge cut off time etc, fully simulate the charging process of the battery, which can effectively protect the battery.



Order information

Voltage	Model	Current	Power	Voltage	Model	Current	Power
15V	SP600-15-60	60A	600W	36V	SP600-36-30	30A	600W
	SP900-15-60	60A	900W		SP900-36-30	30A	900W
Voltage	Model	Current	Power	Voltage	Model	Current	Power
60V	SP600-60-15	15A	600W	80V	SP600-80-12	12A	600W
	SP900-60-15	15A	900W		SP900-80-12	12A	900W
Voltage	Model	Current	Power	Voltage	Model	Current	Power
100V	SP600-100-10	10A	600W	120V	SP600-120-8	8A	600W
	SP900-100-10	10A	900W		SP900-120-8	8A	900W
Voltage	Model	Current	Power	Voltage	Model	Current	Power
150V	SP600-150-6	6A	600W	300V	SP600-300-3	3A	600W
	SP900-150-6	6A	900W		SP900-300-3	3A	900W
Voltage	Model	Current	Power	Voltage	Model	Current	Power
600V	SP600-600-015	1.5A	600W	---	---	---	---
	SP900-600-015	1.5A	900W	---	---	---	---

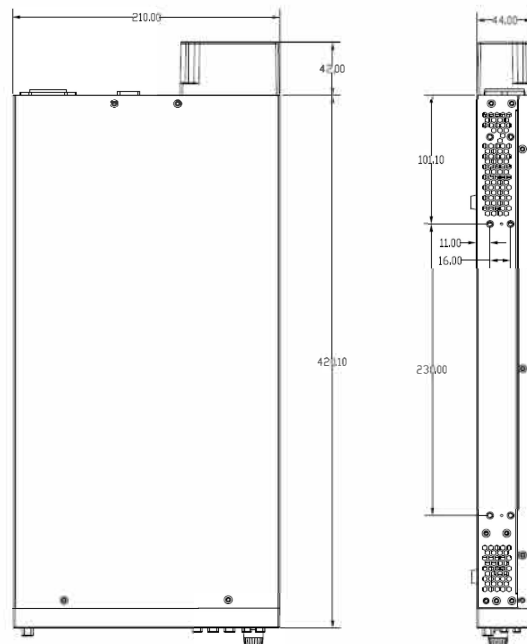
Optional accessories

Item	Model or Spec	Description
RS485 interface	SP-01	
19inch shelf kit1	SP-02	Single device shelf kit
19 inch shelf kit2	SP-03	Two device in parallel shelf kit
Stacking kit	SP-04	Multi layer stacking kit

Specification

General Spec.	
Voltage temperature coefficient	50ppm/°C
Current temperature coefficient	100ppm/°C
Input characteristics	
AC input Voltage	180VAC~255VAC, frequency 47Hz~63Hz
Power factor	0.99@220Vac, rated output power
Max input current (full load)	600W: 3.5A, 900W: 5A @220V ac
Environmental condition	
Operation temperature	0°C~40°C (full load)
Storage temperature	-20°C~70°C
Operation humidity	30%~90% RH (non-condensing)
Storage humidity	10%~95% RH (non-condensing)
Operation Altitude	<2000m
Structural characteristics	
Communication interface	RS232 and LAN, optional RS485
Cooling method	Forced air flow from front to rear, no ventilation holes on the upper cover and base, variable speed fan
Dimension (W*H*D)	210*44*442 mm
Weight	4.5kg

Dimensions



Specification

Electrical Spec-1				
Model	SP600-15-60	SP600-36-30	SP600-60-15	FTP1060-80-12
Rated Voltage	0~15V	0~36V	0~60V	0~80V
Rated Current	0~60A	0~30A	0~15A	0~12A
Rated Power	600W			
Model	SP900-15-60	SP900-36-30	SP900-60-15	SP900-80-12
Voltage	0~15V	0~36V	0~60V	0~80V
Current	0~60A	0~30A	0~15A	0~12A
Power	900W			
Voltage programming				
Resolution	1mV			
Accuracy	0.1%+0.1%F. S.			
Current programming				
Resolution	1mA			
Accuracy	0.1%+0.2%F. S.			
Line regulation				
Voltage	$\leq 0.02\%F. S.$			
Current	$\leq 0.05\%F. S.$			
load regulation				
Voltage	$\leq 0.02\%F. S.$			
Current	$\leq 0.05\%F. S. +2mA$			
Voltage measurement				
Resolution	1mV			
Accuracy	0.1%+0.1%F. S.			
Current measurement				
Resolution	1mA			
Accuracy	0.1%+0.1%F. S.			
Output noise and ripple				
Voltage ripple (Vp-p)	$\leq 50mV$	$\leq 60mV$	$\leq 100mV$	$\leq 150mV$
Voltage ripple (Vrms)	$\leq 12mV$	$\leq 15mV$	$\leq 15mV$	$\leq 25mV$
Current ripple (Arms)	$\leq 60mA$	$\leq 30mA$	$\leq 15mA$	$\leq 12mA$
Rise and fall time				
Rise time (no load)	50ms			
Rise time (full load)	50ms			
Fall time (no load)	2s			
Fall time (full load)	100ms			
Transient response time	Restore the output voltage deviation to within 0.5% of the rated voltage (50%~100% load) $\leq 2ms$			
Efficient	0.86		0.88	

Specification

Electrical Spec-2					
Model	SP600-100-10	SP600-120-08	SP600-150-06	SP600-300-03	SP600-600-015
Rated Voltage	0~100V	0~120V	0~150V	0~300V	0~600V
Rated Current	0~10A	0~8A	0~6A	0~3A	0~1.5A
Rated Power	600W				
Model	SP900-100-10	SP900-120-08	SP900-150-06	SP900-300-03	SP900-600-015
Voltage	0~100V	0~120V	0~150V	0~300V	0~600V
Current	0~10A	0~8A	0~6A	0~3A	0~1.5A
Power	900W				
Voltage programming					
Resolution	10mV				
Accuracy	0.1%+0.1%F. S.				
Current programming					
Resolution	1mA				
Accuracy	0.1%+0.2%F. S.				
Line regulation					
Voltage	$\leq 0.02\%F. S.$				
Current	$\leq 0.05\%F. S.$				
Load regulation					
Voltage	$\leq 0.02\%F. S.$				
Current	$\leq 0.05\%F. S. +2mA$				
Voltage measurement					
Resolution	10mV				
Accuracy	0.1%+0.1%F. S.				
Current measurement					
Resolution	1mA				
Accuracy	0.1%+0.1%F. S.				0.1%+2mA
Output noise and ripple					
Voltage ripple (Vp-p)	$\leq 200mV$	$\leq 200mV$	$\leq 200mV$	$\leq 300mV$	$\leq 600mV$
Voltage ripple (Vrms)	$\leq 30mV$	$\leq 30mV$	$\leq 30mV$	$\leq 75mV$	$\leq 125mV$
Current ripple (Arms)	$\leq 10mA$	$\leq 8mA$	$\leq 6mA$	$\leq 3mA$	$\leq 2mA$
Rise and fall time					
Rise time (no load)	100ms		200ms		250ms
Rise time (full load)	100ms		200ms		250ms
Fall time (no load)	2.5s		3s		3.5s
Fall time (full load)	100ms		120ms		150ms
Transient response time	Restore the output voltage deviation to within 0.5% of the rated voltage (50%~100% load) $\leq 2ms$				
Efficiency	0.88				