

# SPS5000X

## Programmable Switching DC Power Supply



### Main Features

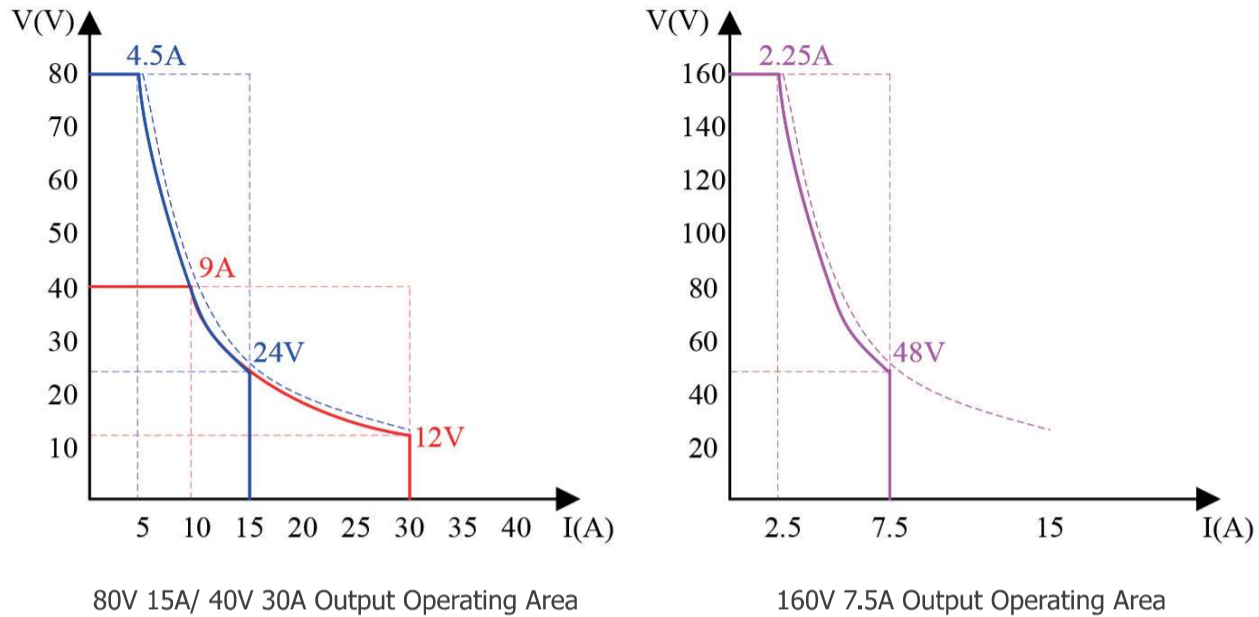
- Rated Output Voltage: 40 V, 50 V, 80 V, 160 V
- Rated Output Power: 180 W, 360 W, 720 W, 1080 W
- Wide range of output voltage and current, high efficiency power supply
- CV, CC priority mode selection, better protection of equipment under test
- Load transient recovery time (Load change from 50~100%) <1 ms
- Adjustable slew rate of output voltage and current
- Setting and readback resolution: 1 mV, 1 mA
- User enabled internal output discharge circuit to accelerate the down programming of the output voltage
- Remote Voltage Sensing
- List function up to 50 steps; can be created from the front panel or by importing list sequence files from a USB memory device
- External analog voltage and resistor control of voltage or current output
- External voltage and current monitoring output
- OVP, OCP, LPP, OTP protection.
- 2.4-inch OLED high brightness liquid crystal display, 170-degree viewing angle
- Standard Interface: USB, LAN, Analog Control Interface
- Optional Interface: USB-GPIB module
- 1/2, 1/3, 1/6 rack mount size
- Embedded Web Server offers remote control through a web browser without the need for the driver or software

# DC Power Supply

## Design Features

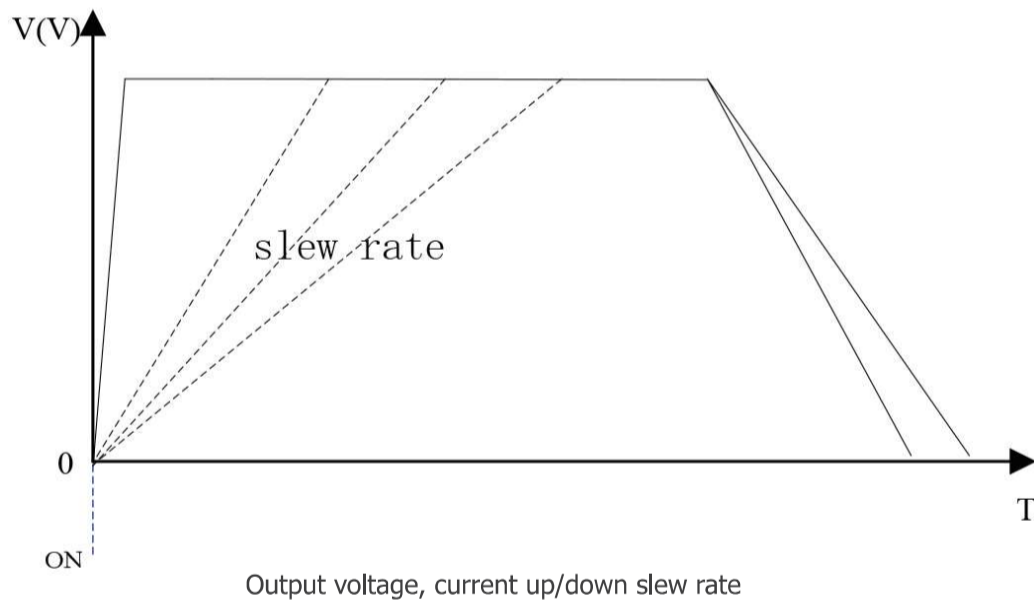
### • Constant Output Power

In constant output power mode, the voltage and current range is switched automatically to maximize the voltage and current without sacrificing the supply's output power. This mode enables the supply to provide a higher output voltage at lower current and a higher output current at lower voltage. Compared to the traditional rectangular output range of most supplies, the SPS5000X series power supply provides a wider voltage and current output range, which greatly increases the utilization of the power supply.



### • Adjustable Output Voltage, Current up/down Slew Rate

The SPS5000X series supports custom setting of the rise/fall slew rate of voltage/current to verify the performance of the object under test as the voltage/current changes. This feature can effectively prevent the damage caused by inrush current to the DUT in applications such as the testing of capacitive current absorbing devices.



### • CV/CC Priority Mode

When the SPS5000X series power supply is set to CC priority mode, at the power output-on stage, it is able to operate under CC priority to limit the inrush current spike and overshoot voltage effectively when the power output is turned on.

In CV priority mode, the output voltage reaches the set voltage value quickly. In some applications, such as LED testing, when the power output is started, the surge current and overshoot voltage will appear when the voltage reaches the on-state voltage of the LEDs.



CV priority mode

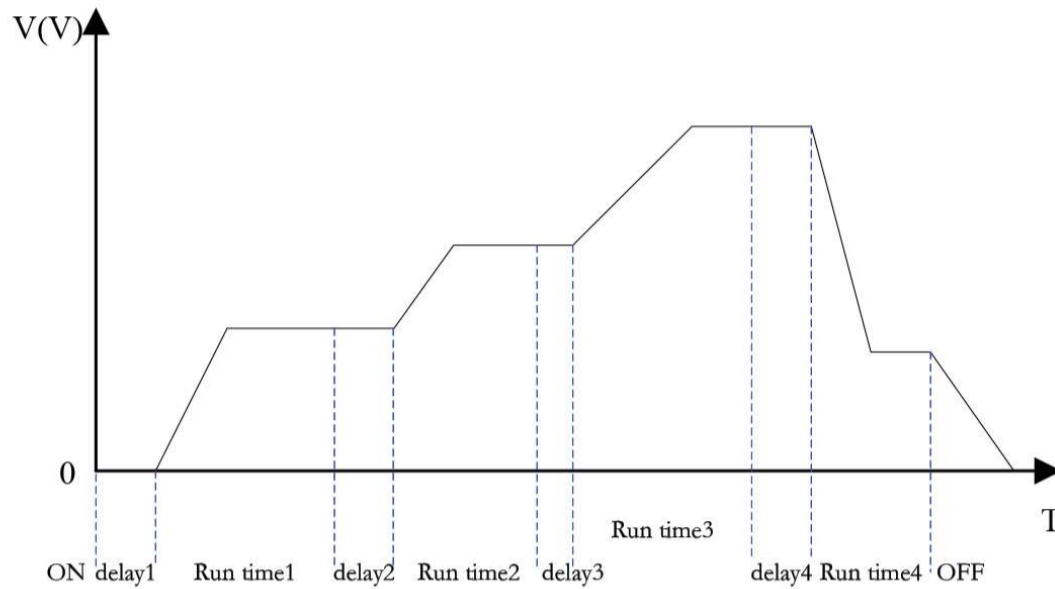


CC priority mode

## • Intuitive List Operation Function

By editing the single-step setting value, duration, and slew rate, the List function can generate multiple complex sequences to meet complex test requirements. The user can edit the sequence by 50 steps natively or import the List sequence file via USB for multi-step running.

The minimum precision of delay time is 1ms. The minimum running time is 1 second.



List mode

## • Rich Interface

The power supply includes USB and Ethernet communication interfaces as standard, and a USB-GPIB converter module as optional. The embedded Web Server enables control and monitor of the power supply directly from a web browser, eliminating the need to install software drivers or applications.

State	Voltage(V)	Current(A)	Power(W)	Channel Enabled	List	Vset(V)	Iset(A)	Output
CH1	CV	29.991	0.000	0.005	<input checked="" type="checkbox"/>	30	6	<input type="checkbox"/>
CH2	CC	0.000	0.000	0.000	<input type="checkbox"/>	0	0	<input type="checkbox"/>
CH3	CC	0.000	0.000	0.000	<input type="checkbox"/>	0	0	<input type="checkbox"/>

Step	Vset(V)	Iset(A)	Delay Time(s)	Running Time(s)	Slope(V/s)	Operation
1	3	4	3	3	3	Delete
2	3	3	2	3	3	Delete
3	2	2	2	2	4	Delete
4	3	3	3	1	1	Delete
5	2	3	3	1	1	Delete
6	3	2	1	3	1	Delete
7	3	2	2	4	1	Delete
8	2	2	3	3	1	Delete
9	3	2	2	2	2	Delete
10	1	3	3	2	2	Delete

Web Server Interface

## Specifications

Model	SPS5041X	SPS5042X	SPS5043X	SPS5044X	SPS5045X	units
Output channel	1		2		3	CH
Rated output voltage	40					V
Rated output current	30	60	90	30		A
Total rated output power	360	720	1080	720	1080	W
Power Ratio	3.33					

# DC Power Supply

Model	SPS5051X	SPS5081X	SPS5082X	SPS5083X	SPS5084X	SPS5085X	units
Output channel	1	1			2	3	CH
Rated output voltage	50	80					V
Rated output current	10	15	30	45	15		A
Total rated output power	180	360	720	1080	720	1080	W
Power Ratio	2.77	3.33					
Model	SPS5161X	SPS5162X	SPS5163X	SPS5164X	SPS5165X		units
Output channel	1			2	3		CH
Rated output voltage	160						V
Rated output current	7.5	15	22.5	7.5			A
Total rated output power	360	720	1080	720	1080		W
Power Ratio	3.33						

## Ordering Information

Product information	Product No	
40 V/30 A 360 W	Single channel programmable Switching DC Power supply	SPS5041X
40 V/60 A 720 W	Single channel programmable Switching DC Power supply	SPS5042X
40 V/90 A 1080 W	Single channel programmable Switching DC Power supply	SPS5043X
40 V/30 A 360 W X2	Dual Channel Programmable Switching DC Power supply	SPS5044X
40 V/30 A 360 W X3	Three Channel Programmable Switching DC Power supply	SPS5045X
50 V/10 A 180 W	Single channel programmable Switching DC Power supply	SPS5051X
80 V/15 A 360 W	Single channel programmable Switching DC Power supply	SPS5081X
80 V/30 A 720 W	Single channel programmable Switching DC Power supply	SPS5082X
80 V/45 A 1080 W	Single channel programmable Switching DC Power supply	SPS5083X
80 V/15 A 360 W X2	Dual Channel Programmable Switching DC Power supply	SPS5084X
80 V/15 A 360 W X3	Three Channel Programmable Switching DC Power supply	SPS5085X
160 V/7.5 A 360 W	Single channel programmable Switching DC Power supply	SPS5161X
160 V/15 A 720 W	Single channel programmable Switching DC Power supply	SPS5162X
160 V/22.5 A 1080 W	Single channel programmable Switching DC Power supply	SPS5163X
160 V/7.5 A 360 W X2	Dual Channel Programmable Switching DC Power supply	SPS5164X
160 V/7.5 A 360 W X3	Three Channel Programmable Switching DC Power supply	SPS5165X
Standard Accessories		
USB Cable -1		
Quick Start -1		
Calibration Certificate -1		
Power Cord -1		
Output guard -1		
Optional Accessories		
SPS5000X-SEC	SPS5000X Series cable	
SPS5000X-PAC	SPS5000X Parallel cable	
SPS5000X-RMK	SPS5000X EIA Standard rack	