

DC POWER SUPPLY

**SIGLENT
TECHNOLOGIES
PRODUCT CATALOG**



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SPS6000X Programmable Switching DC Power Supply

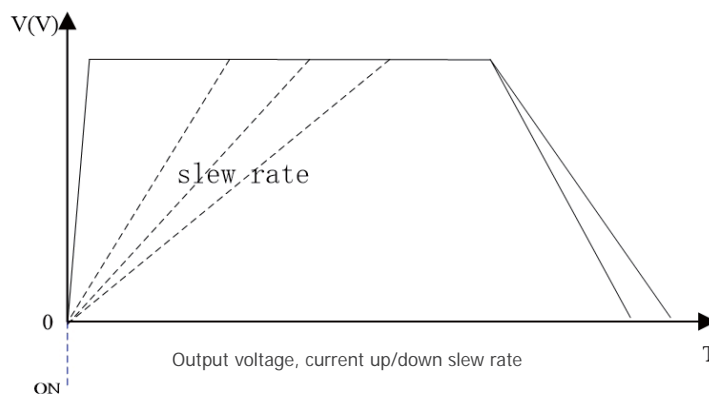
Main Features

- Rated Voltage: 200 V / 100 V
- Rated Current: 25 A / 50 A
- Rated power: 1500 W
- Setting and readback resolution: 10 mV, 10 mA
- OVP, OCP, LPP, OTP protection
- 3.12-inch OLED high-brightness display with a wide viewing angle of 170 degrees
- 44 mm (1U) height, 19" width for convenient rack mounting

Design Features

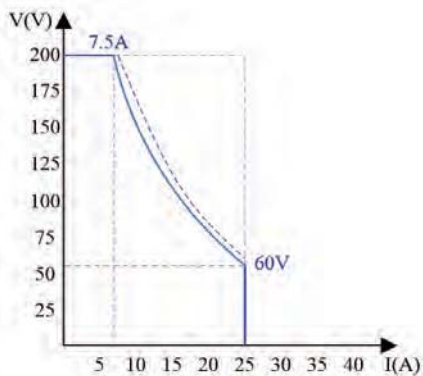
- Adjustable Output Voltage, Current rising/falling Slew Rate

The power supply supports custom rise/fall slew rates of both voltage and current to verify the performance of the device 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.

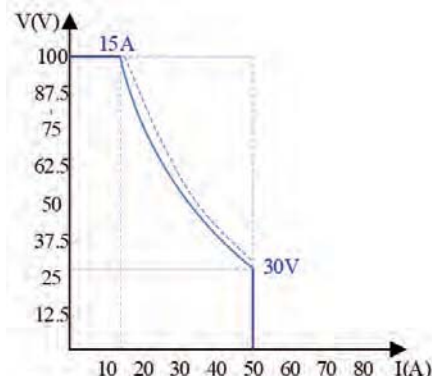


• Constant Output Power

In constant output power mode, the voltage and current range are 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 currents and a higher output current at lower voltages. Compared to the traditional rectangular output range of most supplies, the power supply provides a wider voltage and current output range, which greatly increases the utilization of the power supply.



SPS6225X 1500W Output Operating Area



SPS6150X 1500W Output Operating Area

• CV/CC Priority Mode

When the power supply is set to CC priority mode, at the power output-on stage, it limits the inrush current spike and overshoot voltage 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.



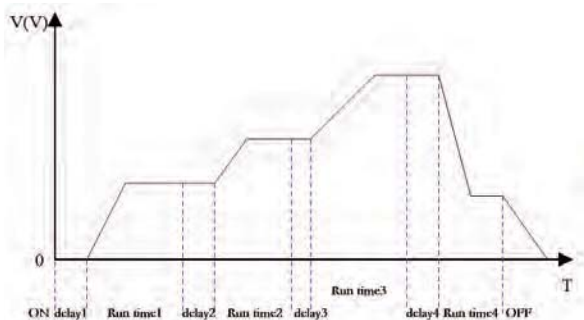
CV priority mode



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 the delay time is 1 ms. The minimum running time is 1 second.



List mode

• Rich Interface

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



Web Server Interface

DC Power Supply

Specifications

Unless otherwise noted, all specifications are guaranteed within the temperature range of 25°C ± 5 °C with a warm-up time of 30 minutes.

Model	SPS6225X	SPS6150X
Rated output voltage	200 V	100 V
Rated output current	25 A	50 A
Total rated output power	1500 W	
Power Ratio	3.33	3.33
C.V Mode		
Line Regulation	40 mV (From 90 ~ 132 Vac or 170 ~ 265 Vac, constant load)	5 mV (From 90 ~ 132 Vac or 170 ~ 265 Vac, constant load)
Load Regulation	100 mV (From no load to full load, constant input voltage)	50 mV (From no load to full load, constant input voltage)
Ripple and Noise ^{(*)1}	(Noise bandwidth 20 MHz; Ripple bandwidth 5 Hz ~1 MHz)	
RIPPLE (pk to pk)@220 Vac Input	220 mV	120 mV
RMS RIPPLE@220 Vac Input	39 mV	30 mV
Voltage programming Accuracy ^{(*)2}	0.1% ± 10 mV	
Voltage programming resolution	10 mV	
Voltage Readback Accuracy ^{(*)2}	0.1% ± 20 mV	
Voltage Readback resolution	10 mV	
Temperature coefficient	100 ppm/°C from rated output voltage following 30-minute warm-up.	
Remote compensation voltage (single wire)	0.6 V	
Rise Time	10% ~ 90% of rated output voltage, rated resistance load	
Rated Load	30 ms	
No Load	30 ms	
Fall Time	90% ~ 10% of rated output voltage, rated resistance load	
Rated Load	15 ms	
output capacitance	1100 uF	1760 uF
Transient response time	2.5 ms (Time for recovery to within 0.5% of its rated output after the transient from 10% to 90% of the rated output power)	
C.C Mode		
Line Regulation	40 mA (From 90 ~ 132Vac or 170 ~ 265Vac, constant load)	30 mA (From 90 ~ 132Vac or 170 ~ 265Vac, constant load)
Load Regulation	40 mA (From No load to Full load, constant input voltage)	50 mA (From No load to Full load, constant input voltage)
r.m.s ^{(*)3}	30 mA	40 mA
Current Setting Accuracy	0.2% ± 30 mA	
Current programming resolution	10 mA	
Current Readback Accuracy	0.2% ± 40 mA	
Current Readback resolution	10 mA	
Temperature coefficient	200 ppm/°C from rated output current following 30-minute warm-up.	

*1: Use a probe to measure the positive and negative poles of the sense terminal, the bandwidth limit is 20 MHz.

*2: %output+offset, when the output voltage is less than 5 V, the offset is 200 mV.

*3: The bandwidth limit measured by the current probe is 1 MHz.

Ordering Information

Product Model	Description
SPS6225X	200V/25A 1500W Single channel programmable DC switching power supply
SPS6150X	100V/50A 1500W Single channel programmable DC switching power supply
Standard Configurations	Quantity
USB Cable	1
Quick Start	1
Calibration Certificate	1
Power Cord	1
Output guard	1

SPS5000X Programmable Switching DC Power Supply



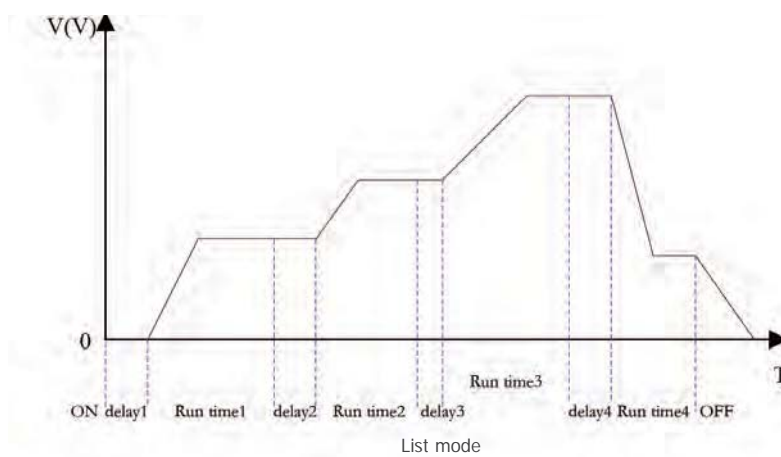
Main Features

- Rated Output Voltage: 40 V, 50 V, 80 V, 160 V; Rated Output Power: 180 W, 360 W, 720 W, 1080 W
- Setting and readback resolution: 1 mV, 1 mA
- 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
- 1/2, 1/3, 1/6 rack mount size

Design Features

- Intuitive List Operation Function

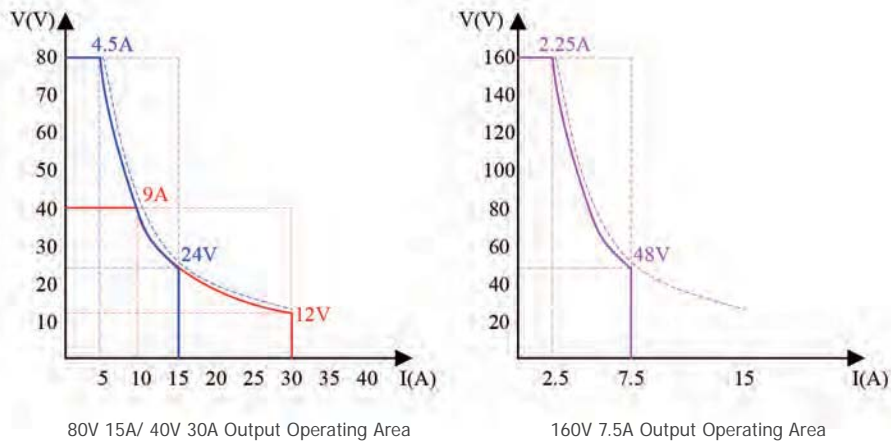
By editing the single-step setting value, duration, and slew rate, the List function can generate multiple complex sequences to meet complex test requirements. The user can edit the sequence by 50 steps natively or import the List sequence file via USB for multi-step running. The minimum precision of delay time is 1ms. The minimum running time is 1 second.



DC Power Supply

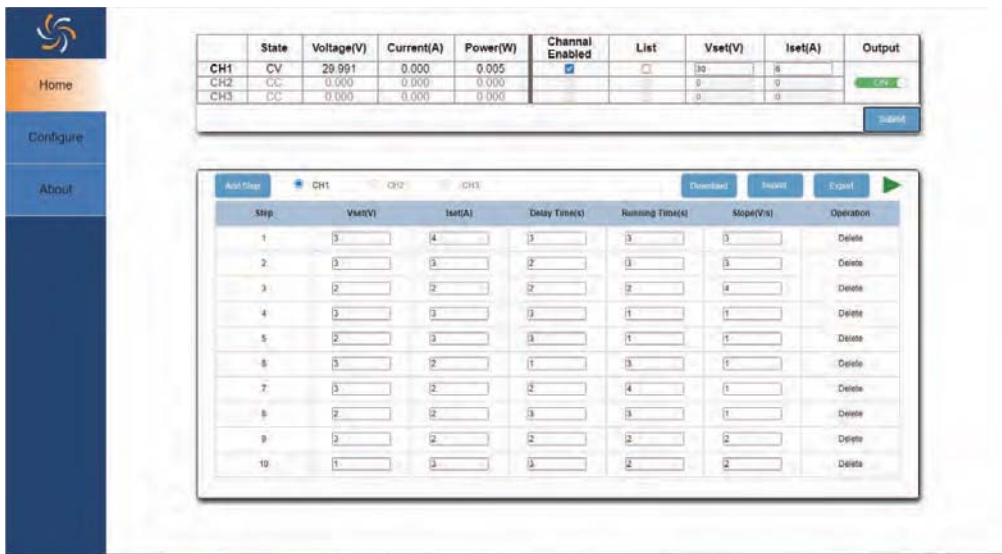
• Constant Output Power

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.



• 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.



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					

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	

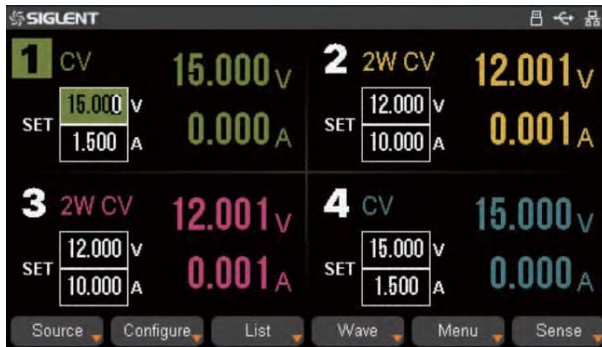


SPD4000X Programmable Linear DC Power Supply

Main Features

- Rated voltage: 32V, 12V, 30V; rated output power: 240W, 285W, 400W
- Up to four high-precision power supplies with independent controllable outputs, supporting CH2 and CH3 series and parallel connections
- Clear graphical interface with waveform and timer display modes
- 5-digit voltage and current display with minimum resolution of 1 mV, 1 mA
- Fast output response time: < 50 us
- The high current channel support remote voltage compensation sense function. The maximum compensation voltage is 0.6V
- Overvoltage protection and overcurrent protection or safe and accurate operation
- Equipped with a 4.3-inch TFT-LCD display (480*272 resolution)
- USB and LAN standard communication
- USB-GPIB module is optional
- Excellent channel density with up to 4 channels in a 3U half rack package
- Internal data storage for setups and parameters
- Embedded Web Server with instrument communication that doesn't require software installation
- Fully SCPI programming command set support as well as a LabView driver for remote control and system automation

Design Features



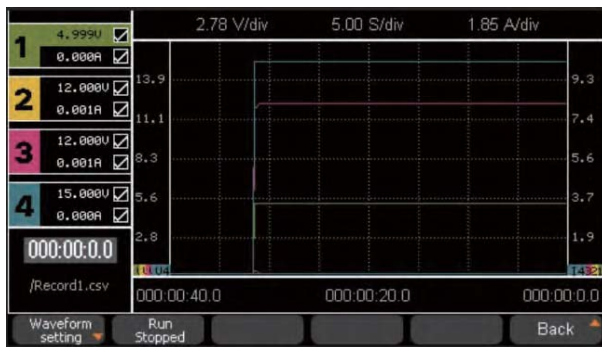
- High-Resolution and High-Precision Output

The highest resolution of 1mV/1mA (SPD4000X), provides excellent setting and read back accuracy. This ensures accurate output even with minimal voltage or current changes. This is impossible for a low-resolution power supply.



- Series/Parallel/Independent Mode

Series and parallel functions allow two channels combined into one output with more power output capability, extending the application range. Each of 4 channels power can be turned on or off independently or all together.



- Real Time Waveform Display

The SPD4000X series programmable linear DC power supply is equipped with a 4.3-inch, true color TFT-LCD display screen with a resolution of 480×272. 4 channels of voltage and current waveform run chart can be set, allowing users to dynamically observe changes in the output state more intuitively.

Step	Voltage	Current	Time
1	5.000	1.000	1.000
2	1.000	0.500	1.000
3	2.000	1.000	1.000
4	3.000	1.000	1.000
5	10.000	1.000	1.000

Repeat Count: 1 Continuous

- List Operation

By editing the single-step setting value and duration, the list function can generate multiple 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. Through panel operation, 8 sets of built-in list sequence output control can be achieved, providing users with simple power programming capabilities.



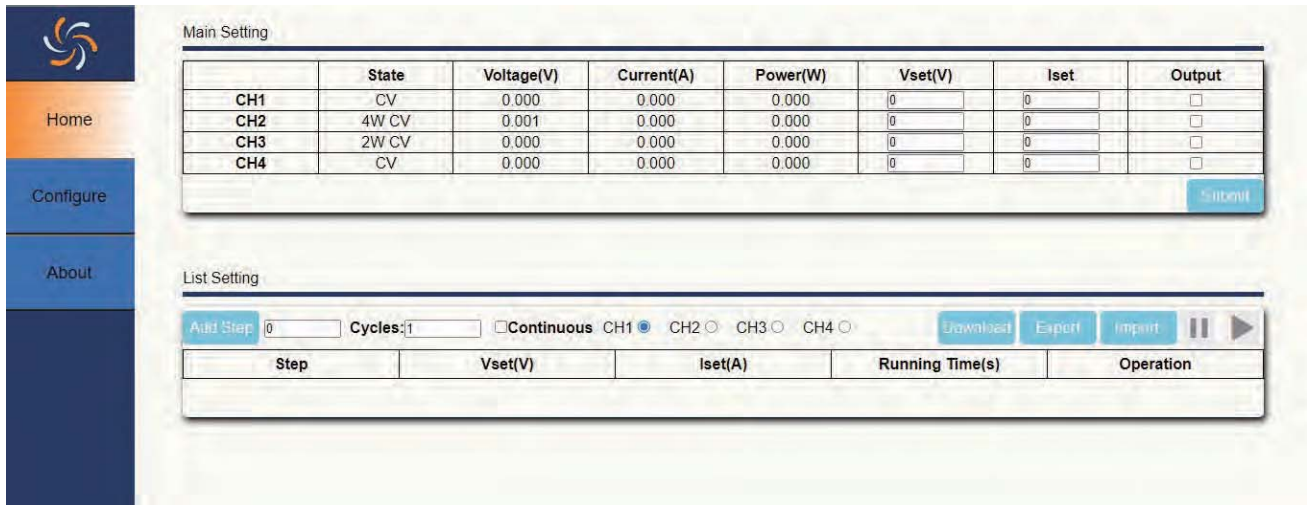
- Save/Recall Settings Parameters

The power supply allows users to save multiple types of files to memory for later recall. The power supply provides a non-volatile internal memory and access to external memory via the USB Host interface on the rear panel. Save setups, settings, and more directly to the supply or to a USB memory stick for transport.

DC Power Supply

- Powerful Web Control

The power supply includes USB and LAN 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. It can meet the application needs of special environments such as high pressure and high temperature. The embedded virtual control panel is simpler and more convenient to use.



Specifications

Model	SPD4323X	SPD4121X	SPD4306X	Units
Output channel	4	4	4	CH
CH1 rated output voltage/current	6/3.2	15/1.5	15/1.5	V/A
CH2 rated output voltage/current	32/3.2	12/10	30/6	V/A
CH3 rated output voltage/current	32/3.2	12/10	30/6	V/A
CH4 rated output voltage/current	6/3.2	15/1.5	15/1	V/A
CH2, CH3 series voltage/current	60/3.2	24/10	60/6	V/A
CH2, CH3 parallel voltage/current	32/6.4	12/20	30/12	V/A
Total rated output power	240	285	400	W

Ordering Information

Product Description	Product No
32V/3.2 A 240 W 4 channels programmable linear DC power supply	SPD4323X
12V/10 A 285 W 4 channels programmable linear DC power supply	SPD4121X
30V/6 A 400 W 4 channels programmable linear DC power supply	SPD4306X

Standard Accessories	
USB cable	1
QuickStart	1
Calibration certificate	1
Power cord	1
3A output test cord	4

SPD3000 Programmable Linear DC Power Supply



Application

- R&D lab general purpose testing
- Teaching lab experiment
- Automotive electronic test
- Production testing and quality assessment inspection

Key Features (SPD3303X/SPD3303X-E)

- 3 independent controlled and isolated output, 32 V/3.2 A×2, 2.5 V/3.3 V/5 V/3.2 A×1, total 220 W
- Max 5 digits Voltage, 4 digits Current Display, Minimum Resolution: 1 mV/1 mA
- Supports panel timing output functions
- 4.3 inch true color TFT- LCD 480x272 display
- 3 types of output modes: independent, series, parallel
- 100 V/120 V/220 V/230 V compatible design to meet the needs of different power grids.
- Intelligent temperature-controlled fan , effectively reducing noise
- Clear graphical interface, with the waveform display function
- Internal 5 groups of system parameter save/recall, supports data storage space expansion
- Provides PC software: EasyPower , supports SCPI , LabView driver

Key Features (SPD3303C)

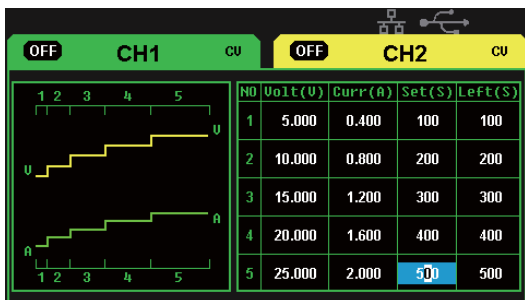
- 3 independent high precision output: 32 V/3.2 A×2, 2.5 V/3.3 V/5 V/3.2 A×1, total 220 W
- 4 digits voltage and 3 digits current display, min resolution: 10 mV, 10 mA
- Three output modes: independent, series and parallel
- 100 V/120 V/220 V/230 V compatible design, to meet the need of different power grids
- Smart temperature controlled fan, effectively reduce the noise
- Save/Recall 5 group system specifications, support data storage expansion
- Connected to PC via USB Device, support SCPI command, to meet the control and communication needs

Specifications

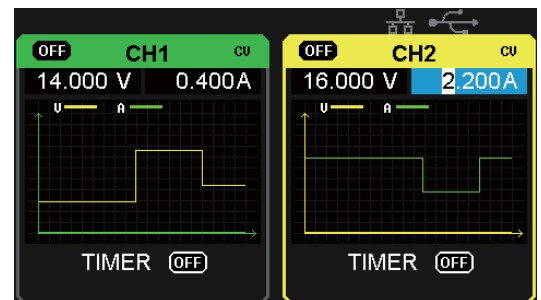
Model	SPD3303C	SPD3303X-E	SPD3303X
Channels	CH1: DC voltage range: 0-32 V, DC current range: 0-3.2 A		
	CH2: DC voltage range: 0-32 V, DC current range: 0-3.2 A		
	CH3: DC voltage range: 2.5/3.3/5.0 V, DC current range: 0-3.2 A		
Max output power	220 W		
Resolution	10 mV / 10 mA		1 mV / 1 mA
Display digits	LED display 4 digits voltage 3 digits current	4.3 inch TFT-LCD display 4 digits voltage 3 digits current	4.3 inch TFT-LCD display 5 digits voltage 4 digits current
Ripple noise	CV/CH3: ≤ 1 mVrms (5 Hz~1 MHz) CC: ≤ 3 mArms		
Standard interface	USB Device	USB Device, LAN	
Dimension	225 mm (W)×136 mm (H)×275 mm (D)		
Weight	7.5 kg (SPD3303C) 8 kg (SPD3303X/X-E)		

- Panel displays the timing output

Through front panel operation, 5 groups of timing settings and output control can be displayed, which provides users a simple power programming function. Also a connection can be made with Siglent's EasyPower PC software providing a full range of communication and control requirements.



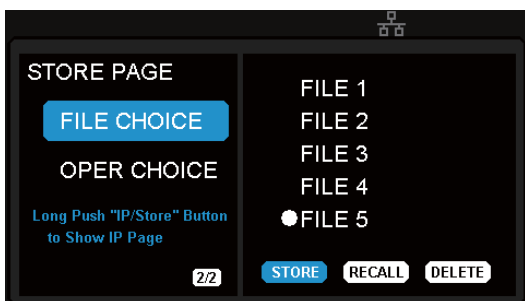
Panel timing output



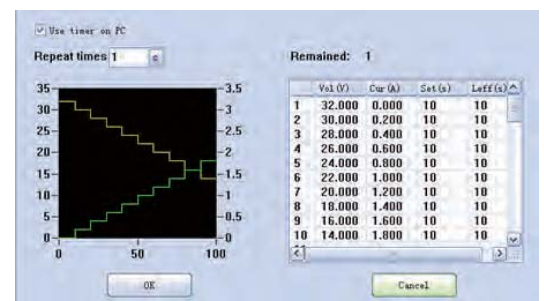
Real time wave display

- Save/Recall setting parameters

SPD3000X series programmable power supply can save or recall 5 groups of setting parameter in internal storage, also supports external storage expansion. You can easily obtain the settings you needed.



Internal Storage



PC Timer



SPD1000X Programmable Linear DC Power Supply

Main Features

- Single path high-precision programmable voltage output :
 - 16 V/8 A, total power up to 128 W
 - 30 V/5 A, total power up to 150 W
- Stable, reliable, Low ripple and noise: $\leq 350 \mu\text{Vrms}/3 \text{ mVpp}$; $< 2 \text{ mArms}$
- Fast transient response time: $< 50 \mu\text{s}$
- 5 digit Voltage, 4 digit Current Display, Minimum Resolution: 1 mV/1 mA
- Supports front panel timing output functions
- 2.8 inch true color TFT- LCD 240 *320 display
- 2 types of output modes: Two-wire output mode, 4-wire compensation output mode, Maximum compensation voltage 1 V
- 100/120/220/230 V compatible design to meet the needs of different power grids
- Intelligent temperature-controlled fan reduces noise
- Clear graphical interface, with the waveform display function
- Internal 5 groups of system parameter save/recall
- Includes PC software: Easypower, supports SCPI, LabView driver

DC Power Supply

Design Features

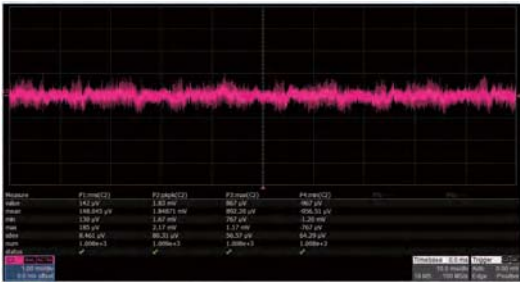
- High-resolution and high-precision output

The SPD1000X power supply features a high measurement resolution of 1 mV/1 mA. This ensures accurate output even with very small changes in voltage or current. This is impossible for a low resolution power supply.

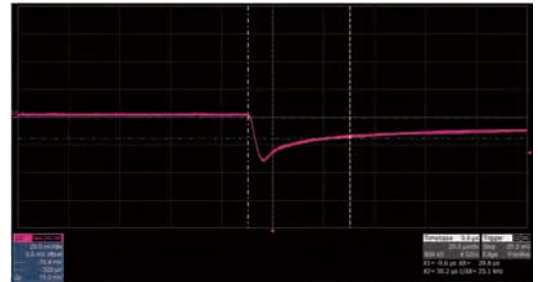
- 4-wire SENSE compensation mode function

In the 4-wire SENSE compensation output mode: By using a separate measurement circuit, the supply can more accurately compensate for any voltage drops due to high resistance connections or long cables. Maximum compensation voltage is 1 V.

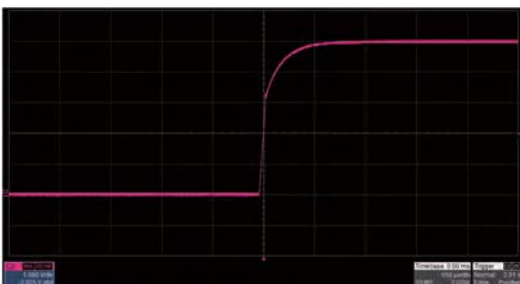
- Low ripple and noise



- Fast transient response time



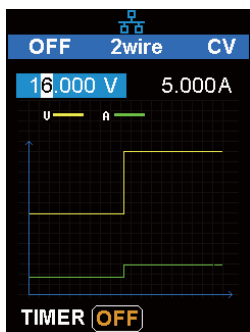
- Low voltage overshoot



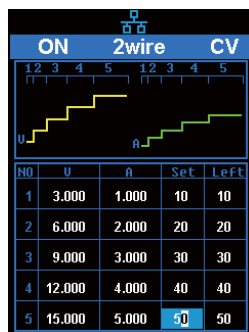
- 0.01% Load Regulation & 0.2% Line Regulation



- Panel displays the timing output



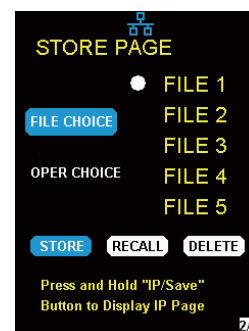
Panel timing output



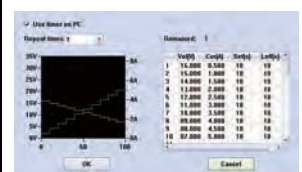
Real time wave display

- Save/Recall setting parameters

SPD1000X programmable power supply can save or recall 5 groups of setting parameters in internal storage. You can easily recall the settings you need.



Internal Storage



PC Timer

Specifications

All the specifications are guaranteed when the instrument has been working for more than 30 minutes under the specified operating temperature. Unless otherwise noted, the specifications are applicable to all the channels of the specified model.

Model	SPD1168X	SPD1305X
DC Output (0 °C to 40°C)	Output Voltage: 0 to 16 V Output Current: 0 to 8 A	Output Voltage: 0 to 30 V Output Current: 0 to 5 A
Display	2.8 inch true color TFT-LCD 5 digit voltage/4 digit current	
Resolution	1 mV/1 mA	
Program Accuracy (25 ± 5 °C)	Voltage: ±(0.03% of reading+10 mV)	
	Current: ±(0.3% of reading+10 mA)	
Program Accuracy (25 ± 5 °C)	Voltage: ±(0.03% of reading+10 mV)	
	Current: ±(0.3% of reading+10 mA)	
Temperature Coefficient per °C (Output Percentage + Offset)	Voltage: ±(0.01% of reading+3 mV)	
	Current: ±(0.01% of reading+3 mA)	
Constant Voltage Mode	Load Regulation	≤ 0.01% + 2 mV
	Ripple & Noise	≤ 350 uVrms/3 mVpp (20 Hz to 20 MHz)
	Recovery Time	< 50 μs (50% load change, minimum load 0.5 A)
Constant Current Mode	Line Regulation	≤ 0.2% + 3 mA
	Load Regulation	≤ 0.2% + 3 mA
	Ripple & Noise	≤ 2 mArms
Locking Key	Yes	
Memory Save/Recall	5 Sets	
Max Output Power	128 W	150 W
Power Source	AC 100 /120/220/230 V ± 10% 50/60 Hz	
Standard Configuration Interface	USB Device, LAN	
Insulation	Case to Terminal ≥ 20 MΩ (DC 500 V) Case to AC line ≥ 30 MΩ (DC 500 V)	
Operating Environment	Outdoor Usage: Elevation: ≤2000 m Environment Temperature 0 to 40 °C Relative Humidity ≤ 80% Installation Level: II Pollution Level: 2	
Storage Environment	Environment Temperature: -10 to 70 °C Relative Humidity ≤ 70%	
Dimension	154.6 (W) × 144.5 (H) × 280(D) mm	
Weight	≈5.5 kg	

About SIGLENT

SIGLENT is an international high-tech company, concentrating on R&D, sales, production and services of electronic test & measurement instruments.

SIGLENT first began developing digital oscilloscopes independently in 2002. After more than a decade of continuous development, SIGLENT has extended its product line to include digital oscilloscopes, isolated handheld oscilloscopes, function/arbitrary waveform generators, RF/MW signal generators, spectrum analyzers, vector network analyzers, digital multimeters, DC power supplies, electronic loads and other general purpose test instrumentation. Since its first oscilloscope was launched in 2005, SIGLENT has become the fastest growing manufacturer of digital oscilloscopes. We firmly believe that today SIGLENT is the best value in electronic test & measurement.

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