

## SP-1U/2U Series High Performance Programmable DC Power Supply & System

»» Application Guide



- High Efficiency
- High Precision
- High Stability

# SP-1U/2U Series High Performance Programmable DC Power Supply & System

## SP-1U/2U Series High Performance Programmable DC Power Supply



600W~1600W



1000W~4000W

Output			Model	Size	Ripple		Response		Certificates		
Rated Voltage	Rated Current	Rated Power			Voltage	Current	Voltage increase	Voltage Drop			
20V	60A	600W	SP20VDC600W	1U ①	40mVp-p/6mVrms	20mA (TYP Value)	≤10ms(No load), ≤10ms(Full load)	≤150ms(No load), ≤20ms(Full load)	CE/RoHs		
		1000W	SP20VDC1000W					≤150ms(No load), ≤15ms(Full load)	CE/RoHs		
		1200W	SP20VDC1200W					≤150ms(No load), ≤12ms(Full load)	CE/RoHs		
32V	50A	600W	SP32VDC600W	1U ①	40mVp-p/6mVrms	20mA (TYP Value)	≤12ms(No load), ≤12ms(Full load)	≤150ms(No load), ≤20ms(Full load)	CE/RoHs		
		1000W	SP32VDC1000W					≤150ms(No load), ≤15ms(Full load)	CE/RoHs/CSA/FCC		
		1200W	SP32VDC1200W					≤150ms(No load), ≤12ms(Full load)	CE/RoHs/CSA/FCC		
	200A	1600W	SP32VDC1600W	1U ①	60mVp-p/10mVrms	200mA (TYP Value)	≤10ms(No load), ≤10ms(Full load)	≤150ms(No load), ≤10ms(Full load)	CE/RoHs/CSA/FCC		
		1000W	SPS32VDC1000W	2U ⑤				≤20ms(No load), ≤40ms(Full load)	≤500ms(No load), ≤45ms(Full load)	CE	
		2000W	SP32VDC2000W					≤20ms(No load), ≤30ms(Full load)	≤500ms(No load), ≤30ms(Full load)	CE	
40V	40A	600W	SP40VDC600W	1U ①	40mVp-p/6mVrms	20mA (TYP Value)	≤10ms(No load), ≤10ms(Full load)	≤150ms(No load), ≤20ms(Full load)	CE/RoHs		
		1000W	SP40VDC1000W					1U ①	≤150ms(No load), ≤15ms(Full load)	CE/RoHs/CSA/FCC	
		1200W	SP40VDC1200W						≤150ms(No load), ≤12ms(Full load)	CE/RoHs/CSA/FCC	
	120A	1600W	SP40VDC1600W	1U ①	40mVp-p/6mVrms	20mA (TYP Value)	≤10ms(No load), ≤10ms(Full load)	≤150ms(No load), ≤10ms(Full load)	CE/RoHs/CSA/FCC		
		1000W	SPS40VDC1000W	2U ⑤				≤10ms(No load), ≤10ms(Full load)	≤350ms(No load), ≤10ms(Full load)	CE/RoHs	
		2000W	SP40VDC2000W					≤10ms(No load), ≤10ms(Full load)	≤350ms(No load), ≤10ms(Full load)	CE/RoHs	
75V	25A	600W	SP75VDC600W	1U ②	40mVp-p/6mVrms	10mA (TYP Value)	≤10ms(No load), ≤10ms(Full load)	≤160ms(No load), ≤20ms(Full load)	CE/RoHs/CSA		
		1000W	SP75VDC1000W					1U ②	≤160ms(No load), ≤15ms(Full load)	CE/RoHs/CSA/FCC	
		1200W	SP75VDC1200W						≤160ms(No load), ≤12ms(Full load)	CE/RoHs/CSA/FCC	
	60A	1500W	SP75VDC1500W	2U ④	40mVp-p/8mVrms	10mA (TYP Value)	≤15ms(No load), ≤15ms(Full load)	≤160ms(No load), ≤10ms(Full load)	CE/RoHs/CSA/FCC		
		4000W	SP75VDC4000W					≤15ms(No load), ≤15ms(Full load)	≤450ms(No load), ≤20ms(Full load)	CE/RoHs/CSA/FCC	
		1000W	SP80VDC1000W					2U ④	≤15ms(No load), ≤15ms(Full load)	≤450ms(No load), ≤30ms(Full load)	CE
2000W	SP80VDC2000W	≤15ms(No load), ≤15ms(Full load)	≤450ms(No load), ≤30ms(Full load)	CE/RoHs							
120V	40A	1000W	SPS120VDC1000W	2U ④	80mVp-p/15mVrms	10mA (TYP Value)	≤20ms(No load), ≤20ms(Full load)	≤350ms(No load), ≤21ms(Full load)	CE/RoHs		
		2000W	SP120VDC2000W					≤20ms(No load), ≤20ms(Full load)	≤350ms(No load), ≤21ms(Full load)	CE/RoHs/CSA/FCC	
		3000W	SP120VDC3000W					≤20ms(No load), ≤20ms(Full load)	≤350ms(No load), ≤21ms(Full load)	CE/RoHs/CSA/FCC	
		4000W	SP120VDC4000W					≤20ms(No load), ≤20ms(Full load)	≤350ms(No load), ≤21ms(Full load)	CE/RoHs	
150V	10A	600W	SP150VDC600W	1U ③	120mVp-p/40mVrms	10mA (TYP Value)	≤25ms(No load), ≤25ms(Full load)	≤400ms(No load), ≤32ms(Full load)	CE/RoHs		
		1000W	SP150VDC1000W					1U ③	≤25ms(No load), ≤25ms(Full load)	≤400ms(No load), ≤32ms(Full load)	CE/RoHs
		1200W	SP150VDC1200W						≤25ms(No load), ≤25ms(Full load)	≤400ms(No load), ≤32ms(Full load)	CE/RoHs
	30A	1500W	SP150VDC1500W	2U ④	80mVp-p/15mVrms	10mA (TYP Value)	≤25ms(No load), ≤25ms(Full load)	≤400ms(No load), ≤32ms(Full load)	CE/RoHs		
		1000W	SPS150VDC1000W					≤25ms(No load), ≤25ms(Full load)	≤500ms(No load), ≤25ms(Full load)	CE/RoHs	
		2000W	SP150VDC2000W					≤25ms(No load), ≤25ms(Full load)	≤500ms(No load), ≤25ms(Full load)	CE/RoHs/CSA/FCC	
200V	8A	600W	SP200VDC600W	1U ③	120mVp-p/40mVrms	10mA (TYP Value)	≤30ms(No load), ≤30ms(Full load)	≤600ms(No load), ≤50ms(Full load)	CE/RoHs		
		1000W	SP200VDC1000W					1U ③	≤30ms(No load), ≤30ms(Full load)	≤600ms(No load), ≤40ms(Full load)	CE/RoHs
		1200W	SP200VDC1200W						≤30ms(No load), ≤30ms(Full load)	≤600ms(No load), ≤36ms(Full load)	CE/RoHs
	24A	1500W	SP200VDC1500W	2U ④	150mVp-p/30mVrms	20mA (TYP Value)	≤30ms(No load), ≤30ms(Full load)	≤600ms(No load), ≤30ms(Full load)	CE/RoHs		
		1000W	SPS200VDC1000W					≤30ms(No load), ≤30ms(Full load)	≤500ms(No load), ≤20ms(Full load)	CE/RoHs	
		2000W	SP200VDC2000W					≤30ms(No load), ≤30ms(Full load)	≤500ms(No load), ≤20ms(Full load)	CE/RoHs	
600V	10A	3000W	SP200VDC3000W	2U ⑤	350mVp-p/40mVrms	10mA (TYP Value)	≤60ms(No load), ≤60ms(Full load)	≤800ms(No load), ≤110ms(Full load)	CE/RoHs		
		4000W	SP200VDC4000W					≤60ms(No load), ≤60ms(Full load)	≤800ms(No load), ≤90ms(Full load)	CE/RoHs	
		1000W	SPS600VDC1000W					≤60ms(No load), ≤60ms(Full load)	≤800ms(No load), ≤75ms(Full load)	CE/RoHs	
		2000W	SP600VDC2000W					≤60ms(No load), ≤60ms(Full load)	≤800ms(No load), ≤60ms(Full load)	CE/RoHs	
800V	7.5A	3000W	SP600VDC3000W	2U ⑤	800mVp-p/200mVrms	10mA (TYP Value)	≤60ms(No load), ≤60ms(Full load)	≤800ms(No load), ≤60ms(Full load)	CE/RoHs		
		4000W	SP600VDC4000W					≤60ms(No load), ≤60ms(Full load)	≤800ms(No load), ≤60ms(Full load)	CE/RoHs	
		1000W	SPS800VDC1000W					≤60ms(No load), ≤60ms(Full load)	≤800ms(No load), ≤60ms(Full load)	CE/RoHs	
		2000W	SP800VDC2000W					≤60ms(No load), ≤60ms(Full load)	≤800ms(No load), ≤60ms(Full load)	CE/RoHs	
4000W	7.5A	3000W	SP800VDC3000W	2U ⑤	800mVp-p/200mVrms	10mA (TYP Value)	≤60ms(No load), ≤60ms(Full load)	≤800ms(No load), ≤60ms(Full load)	CE/RoHs		
		4000W	SP800VDC4000W					≤60ms(No load), ≤60ms(Full load)	≤800ms(No load), ≤60ms(Full load)	CE/RoHs	

# SP-1U/2U Series High Performance Programmable DC Power Supply & System

## SPS Series DC Power Supply System



13U



27U



19U

Rated Voltage	Output		Model	Size	Certificates
	Rated Current	Rated Power			
32V	600A	12kW	SPS32VDC12000W-2-13	13U <sup>6</sup>	CE
	1200A	24kW	SPS32VDC24000W-2-19	19U <sup>7</sup>	
	2000A	40kW	SPS32VDC40000W-2-27	27U <sup>8</sup>	
40V	360A	12kW	SPS40VDC12000W-2-13	13U <sup>6</sup>	
	720A	24kW	SPS40VDC24000W-2-19	19U <sup>7</sup>	
	1200A	40kW	SPS40VDC40000W-2-27	27U <sup>8</sup>	
75V	180A	12kW	SPS75VDC12000W-2-13	13U <sup>6</sup>	
	360A	24kW	SPS75VDC24000W-2-19	19U <sup>7</sup>	
	600A	40kW	SPS75VDC40000W-2-27	27U <sup>8</sup>	
80V	180A	9kW	SPS80VDC9000W-2-13	13U <sup>6</sup>	
	360A	18kW	SPS80VDC18000W-2-19	19U <sup>7</sup>	
	600A	30kW	SPS80VDC30000W-2-27	27U <sup>8</sup>	
96V	200A	12kW	SPS96VDC12000W-2-13	13U <sup>6</sup>	
	120A	12kW	SPS120VDC12000W-2-13	13U <sup>6</sup>	
120V	240A	24kW	SPS120VDC24000W-2-19	19U <sup>7</sup>	
	400A	40kW	SPS120VDC40000W-2-27	27U <sup>8</sup>	
	90A	12kW	SPS150VDC12000W-2-13	13U <sup>6</sup>	
150V	180A	24kW	SPS150VDC24000W-2-19	19U <sup>7</sup>	
	300A	40kW	SPS150VDC40000W-2-27	27U <sup>8</sup>	
	200A	24kW	SPS192VDC24000W-2-19	19U <sup>7</sup>	
192V	200A	24kW	SPS192VDC24000W-2-19	19U <sup>7</sup>	
	72A	12kW	SPS200VDC12000W-2-13	13U <sup>6</sup>	
	144A	24kW	SPS200VDC24000W-2-19	19U <sup>7</sup>	
200V	144A	24kW	SPS200VDC24000W-2-19	19U <sup>7</sup>	
	240A	40kW	SPS200VDC40000W-2-27	27U <sup>8</sup>	

Rated Voltage	Output		Model	Size	Certificates
	Rated Current	Rated Power			
225V	60A	12kW	SPS225VDC12000W-2-13	13U <sup>6</sup>	CE
240V	60A	9kW	SPS240VDC9000W-2-13	13U <sup>6</sup>	
	120A	24kW	SPS240VDC24000W-2-19	19U <sup>7</sup>	
320V	200A	40kW	SPS320VDC40000W-2-27	27U <sup>8</sup>	
360V	40A	12kW	SPS360VDC12000W-2-13	13U <sup>6</sup>	
400V	120A	40kW	SPS400VDC40000W-2-27	27U <sup>8</sup>	
	30A	12kW	SPS450VDC12000W-2-13	13U <sup>6</sup>	
450V	60A	24kW	SPS450VDC24000W-2-19	19U <sup>7</sup>	
	60A	18kW	SPS480VDC18000W-2-19	19U <sup>7</sup>	
600V	30A	12kW	SPS600VDC12000W-2-13	13U <sup>6</sup>	
	60A	24kW	SPS600VDC24000W-2-19	19U <sup>7</sup>	
	100A	40kW	SPS600VDC40000W-2-27	27U <sup>7</sup>	
720V	40A	24kW	SPS720VDC24000W-2-19	19U <sup>7</sup>	
	60A	40kW	SPS750VDC40000W-2-27	27U <sup>8</sup>	
800V	22.5A	12kW	SPS800VDC12000W-2-13	13U <sup>6</sup>	
	45A	24kW	SPS800VDC24000W-2-19	19U <sup>7</sup>	
	60A	30kW	SPS800VDC30000W-2-27	27U <sup>8</sup>	
	75A	40kW	SPS800VDC40000W-2-27	27U <sup>8</sup>	
900V	30A	24kW	SPS900VDC24000W-2-19	19U <sup>7</sup>	
	24A	24kW	SPS1200VDC24000W-2-19	19U <sup>7</sup>	
1200V	40A	40kW	SPS1200VDC40000W-2-27	27U <sup>8</sup>	

\*This formula is the standard cabinet for SP-2U model; it is available to select cabinet with different specification according to exact situation.

## Dimensions & Weight



① 423.0x44.0x447.0 mm & 9.2kg



② 423.0x44.0x447.0 mm & 8.9kg



③ 423.0x44.0x447.0 mm & 9.3kg



④ 423.0x87.0x469.0 mm & 13.2kg



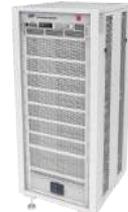
⑤ 423.0x87.0x514.0 mm & 14.7kg



⑥ 600.0x576.0x700.0mm & 53.5kg+15kg\*3(REF)



⑦ 600.0x843.0x700.0mm & 100kg+15kg\*6(REF)



⑧ 600.0x1196.0x700.0mm & 120kg+15kg\*10(REF)

# SP-1U/2U Series High Performance Programmable DC Power Supply & System

## Features

- Low ripple and noise
- High accuracy and high resolution
- CC and CV working mode switch freely
- Support LIST/SEQUENCE file editing
- OVP/OCV/OPP/OTP/SCP
- Remote compensation
- With external analog control input interface
- Standard USB/LAN/RS485/RS232 communication interface
- Master/Slave parallel and series operation mode for up to 10 units

## Optional Information

GPIB communication card & cables



Three-core input cable (Input voltage range 176-265V, only supported on 1U height units)



## Front Panel Introduction

1U Power Supply Front Panel



2U Power Supply Front Panel

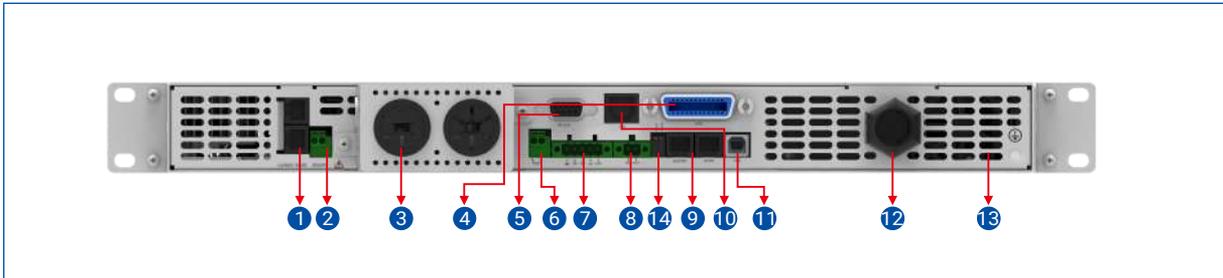


Key	Introduction
	Numeric Key
	Decimal Point
	Escape
	UP, used for choose menu or increase set value in menu operation
	DOWN, used for choose menu or decrease set value in menu operation
	Enter
	Set power supply's output voltage value
	Set power supply's output current-limiting value

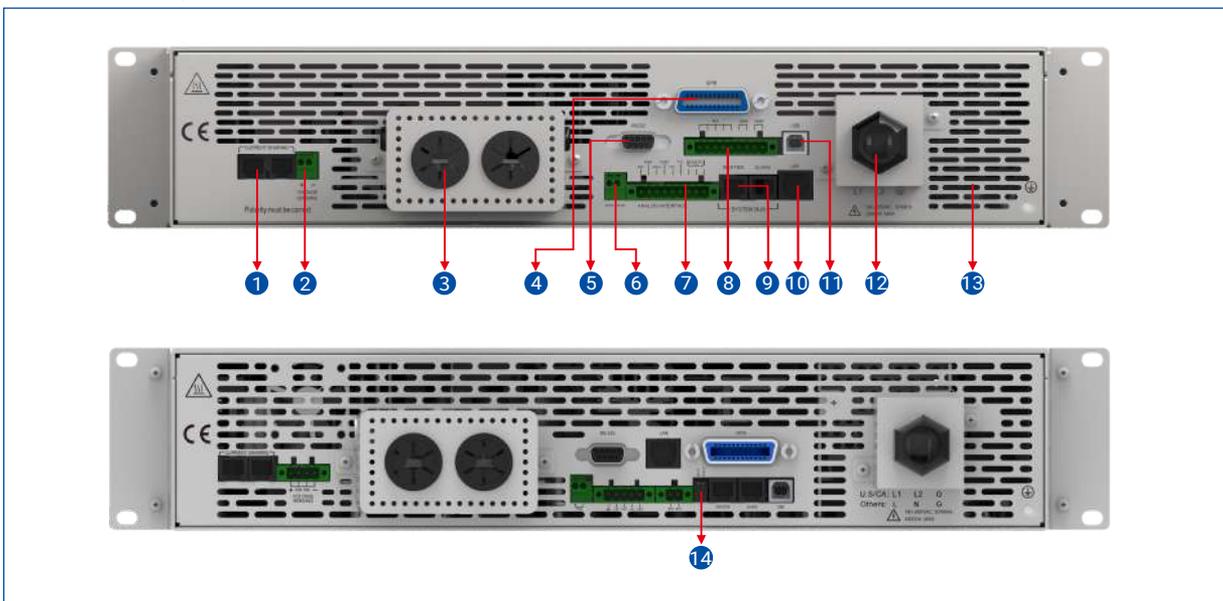
Key	Introduction
	Press it to back to the main interface quickly
	Control ON/OFF of power supply
	Menu
	Work with functional keys to realize multifunction
LOCAL	Panel operation
RECALL	Recall stored setting value of power supply from internal storage
STORE	Store current settings of power supply to storage location
DVM/POWER	Display DVM value and power value

## SP Series Back Panel Introduction

### 1U Power Supply Back Panel



### 2U Power Supply Back Panel



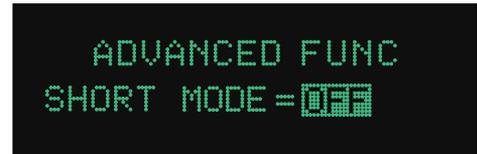
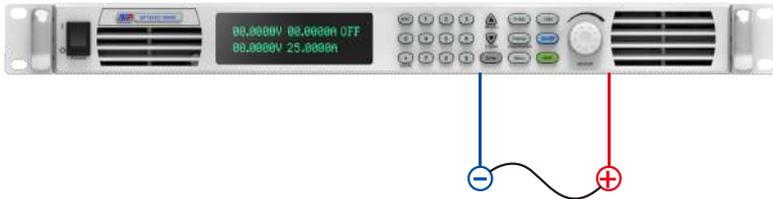
- ① AVG1/AVG2 Connector, used for connecting between units to enable current sharing.
- ② Voltage Remote Supporting Connector (VOLTAGE SENSING): Used to support wire voltage drops.
- ③ DC output terminal: Left (-), Right (+).
- ④ GPIB Communication connector.
- ⑤ RS-232 Communication connector.
- ⑥ DVM Connector.
- ⑦ ANALOG INTERFACE signal connection terminal.
- ⑧ RS-485 Communication connector.
- ⑨ SYSTEM BUS control, used for transmission of master and slaves.
- ⑩ LAN Communication Interface.
- ⑪ USB Communication Interface.
- ⑫ AC Power Connection terminal.
- ⑬ The fan duct outlet.
- ⑭ Termination resistor for RS485 and CAN Communication.

Note: There is a slight difference between these two kinds of rear panels of 2U units.

# SP-1U/2U Series High Performance Programmable DC Power Supply & System

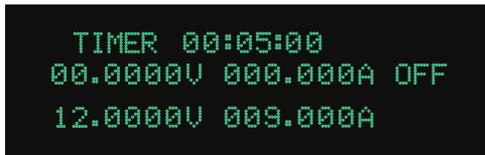
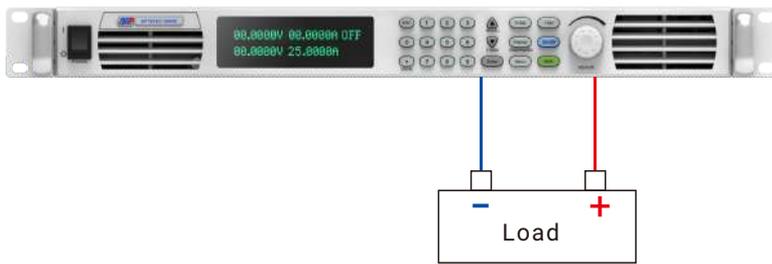
## Short Mode

This function is applicable to cable/fuse current carrying capacity test, when activated, the power supply will shutdown the short circuit protection function and maintain ultra-low voltage to output rated current.



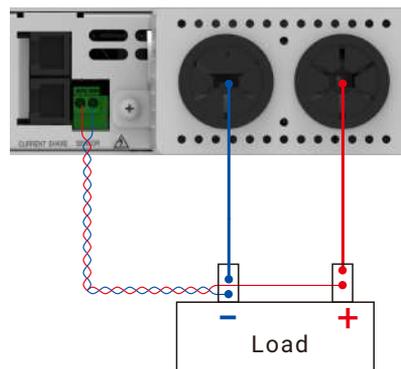
## Timer Control Function

This function is applicable to unattended occasions, activate the timer and the output, the screen will show the countdown of the timer. Once it reaches down to zero, the supply will turn off the output automatically. And the full protection of the power supply will make sure the safe usage of this function.



## Remote Compensation Function

This function is applicable to compensate the voltage drop on the load line in order to improve the accuracy of test. In practical applications, even if the voltage drop is negligible, it is best to connect the remote compensation cable to the output terminal. When using the remote compensation functionality, please disconnect the S+, S- from the power supply's output terminal, and connect them to both ends of the DUT. Maximum compensation voltage is up to 5V. The output power need be lower than 1.05% of the rated power after compensation.



## External Control Function

This series power supply can offer external voltage/ potentiometers control output, can be controlled by external voltage(0~5V) or external potentiometers(5~10K) in order to remotely adjust the power supply voltage and current regulation settings and the output status of the power supply.

### External Voltage Control



### External Potentiometer Control

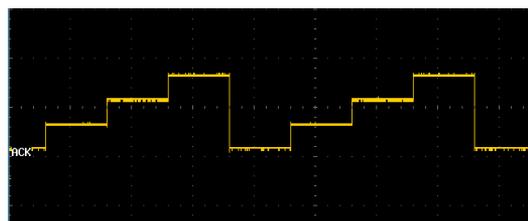
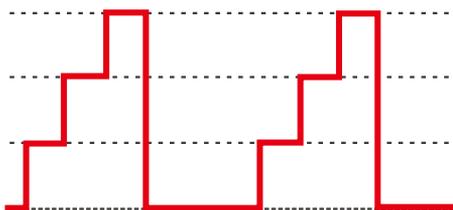


## LIST Waveform Editing Function

This series power supply supports 3 kinds of LIST file editing format in order to meet the output elements of different test requirements. The minimum resolution of time setting is 1ms.

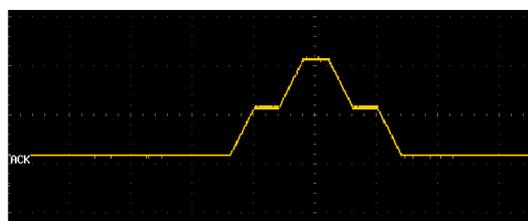
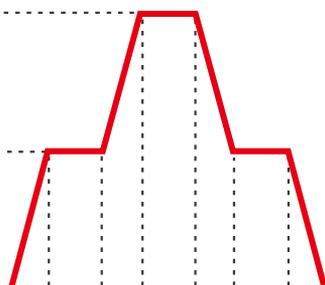
### Impulse File Format

Sets the trend of the output voltage over time and its duration. Set the mode of the output waveform execution as required, LOOP, CONT, STEP.



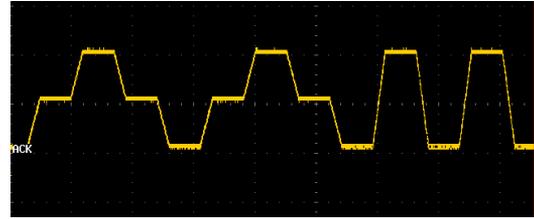
### Slope File Format

Support to set the slope of output voltage, achieve to slowly increase and drop of the output voltage. Set the mode of the output waveform execution as required, LOOP, CONT, STEP.



## SEQUENCE Waveform Editing function

This function is an upgrade version of the LIST file editing. Its every step is a complete LIST file. It can combine several LIST file and output, meanwhile, it can set the number of repetitions per LIST file and number of executions of the entire SEQUENCE file.



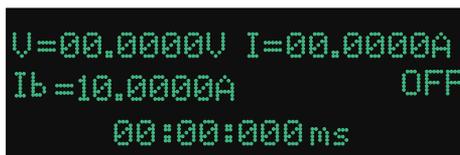
## Measure Average Function

Under this mode, if the DUT has a sharp change in voltage and current, the averaging times can be adjusted to be FAST, MEDIUM or SLOW to make the displayed value more stable.



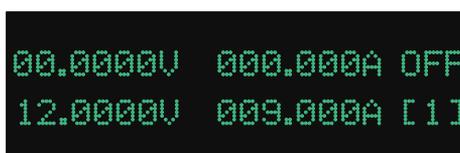
## Current Counting Function

This function offers testing of the cutoff time of a breaker or a fuse. Starts timing when the current reaches the circuit breaker or fuse's fusing current  $I_b$ , stops timing when disconnected, the timing resolution is up to 200ms.



## Quick Recall Function

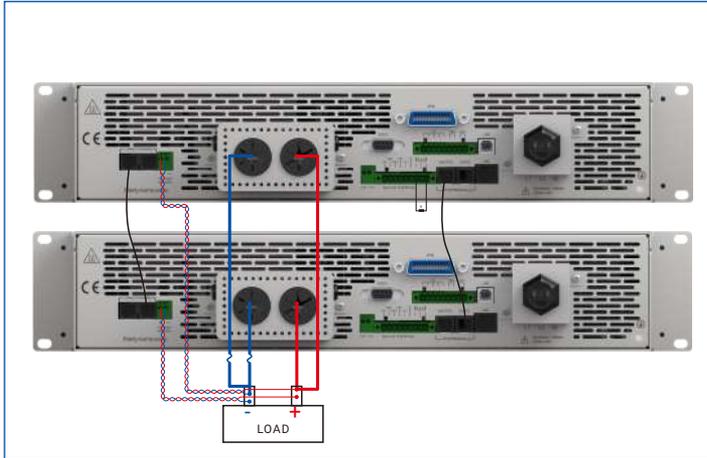
Support to recall the stored parameters directly by the numeric keys on the front panel. Firstly, user stores the frequently used data in the power supply's memory, press the numeric key directly after entering the quick recall mode, can quick recall the datas which are stored in **【1】** ~ **【9】**



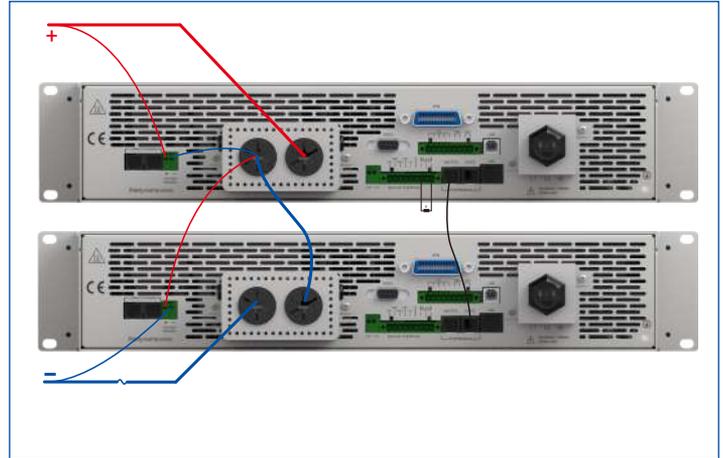
## Master/Slave Mode

This series power supply support Master/Slave parallel and series operation mode for up to 10 units, extended power up to 40kW. The current sharing function in parallel mode realizes the equalization of the power supplies in the system, thereby ensuring the extended power without affecting the performance index of the power supply. CAN parallel mode realizes the same dynamic response of the system as single unit, realizing high-speed and non-delayed synchronous response of master and slave.

### Parallel Connection

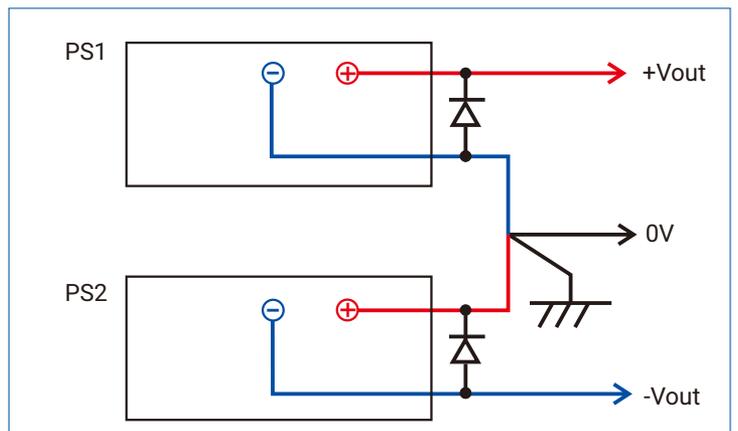
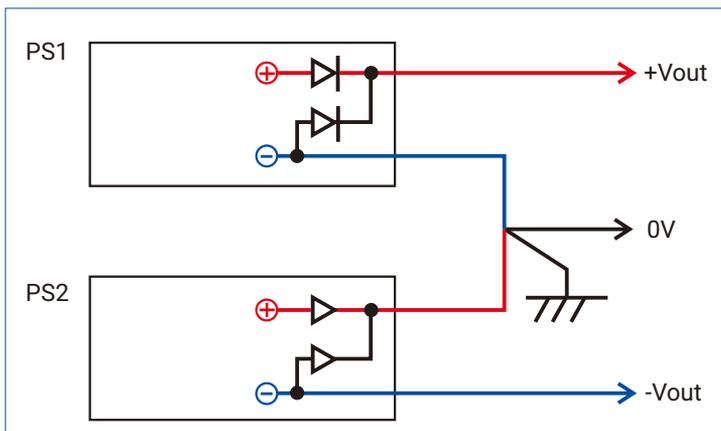
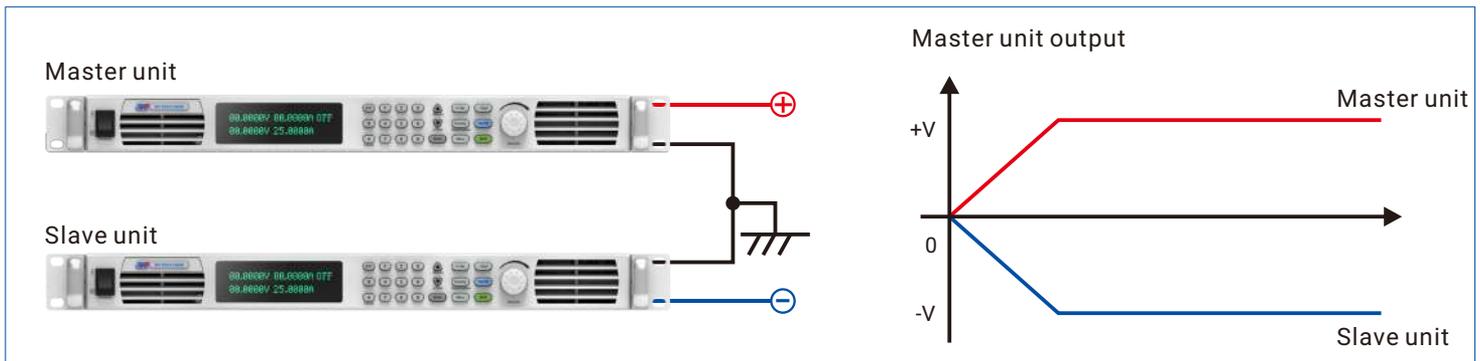


### Series Connection



## Positive / Negative Voltage Output Mode

This mode which enables both positive and negative outputs simultaneously in master slave operation.



The power supply below 200A has been connected with anti reverse diode, so the external diode isn't needed in the actual connection, and the 200A power supply needs to connect the diode.

# SP-1U/2U Series High Performance Programmable DC Power Supply & System

## Built-in Standard Automobile Electric Test Waveform

It can be used to simulate the transient interference of power supply which may often be encountered in the process of automobile startup and operation. In accordance with industry standards, this series power supply has built-in voltage curves under the DIN40839 and ISO 16750-2 standards for 12V and 24V test grades. User can call the voltage curve directly for testing or edit as desired.

The built-in standard waveform cutline and file names are as below:

No.	Standard	Test item name	Waveform	List/Sequence File Name(Built-in)
1	ISO16750-2	Automobile Start Transient Voltage Drop		List 3-2 (12V Voltage Grade) List 3-7 (24V Voltage Grade)
2	ISO16750-2	Automobile Electronic Restoration Function Test		Sequence1 (includes List 3-3 and List 3-4, for 12V system) Sequence 2 (includes List 3-8 and List 3-9, for 24V system)
3	ISO16750-2	Automobile Electronic Engine Start Test		List 3-5
4	DIN40839	Automobile Electronic Engine Start Test		List 3-1

## Anti reverse irrigation/Power Sink Function

This series power supply has protection against reverse irrigation, so as to cut off the current of DUT in a certain test condition to the direction of power supply, and prevent the damage to the power supply hardware circuit from DUT.



Meanwhile, this series power supply comes standard with short circuit copper sheet, When the test requires the power supply to absorb the spike generated by DUT to ensure the safety of the operation, the short-circuit copper piece can be connected, and the energy is absorbed by the output capacitor inside the power supply and other circuits.



**Note:** Please consult your sales representative to get detailed information about anti reverse irrigation protection for power supply models above 200A.

## Monitoring Software

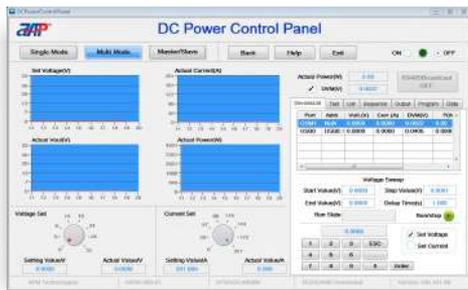
All power supplies come standard with graphical monitoring software, which supports all communication interfaces and covers almost all functions of the power supply front panel operation. In the communication selection interface, users can select the communication interface and search for the connected power supply according to the actual connection.



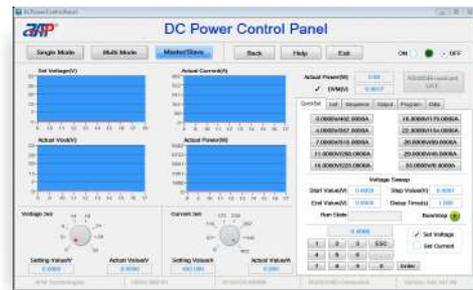
When the communication port has only one power supply connection, it enters the Single Mode interface. Includes the basic settings of voltage and current and measurement function, and List waveform editing/ saved test data function.



When the communication port has more than one power supply connection, it enters the Multi Mode interface. Supports switching control or display current power supply's settings.

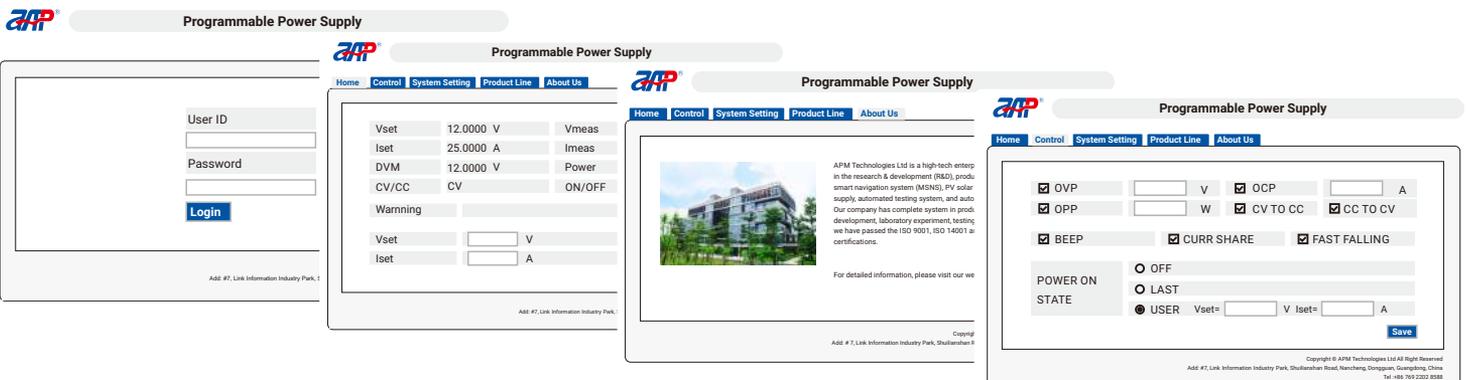


When the communication port connects the power supply that is the Master unit, it enters Master/Slave interface. The Master/Slave interface only maintains communication with the Master unit, and the parameters are synchronously written to the slaves.



## WebServer Function

Use can control the power supply on a computer using a web browser. No need to install the monitoring software, just open web browser and input IP address to control the unit, which can meet basic setting and monitoring requirements.



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SP75VDC600W -----	14	SP120VDC2000W -----	21
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SPS200VDC1000W -----	20		
SPS600VDC1000W -----	20		
SPS800VDC1000W -----	20		

## SP-1U/2U Series High Performance Programmable DC Power Supply

### Selection List:

Model	Voltage	Current	Power	Corresponding page
SP20VDC600W	20V	60A	600W	P14
SP32VDC600W	32V	50A	600W	P14
SP40VDC600W	40V	40A	600W	P14
SP75VDC600W	75V	25A	600W	P14
SP150VDC600W	150V	10A	600W	P14
SP200VDC600W	200V	8A	600W	P14
SP20VDC1000W	20V	60A	1000W	P15
SP32VDC1000W	32V	50A	1000W	P15
SP40VDC1000W	40V	40A	1000W	P15
SP75VDC1000W	75V	25A	1000W	P15
SP150VDC1000W	150V	10A	1000W	P15
SP200VDC1000W	200V	8A	1000W	P15
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SP200VDC1200W	200V	8A	1200W	P16
SP75VDC1500W	75V	25A	1500W	P17
SP150VDC1500W	150V	10A	1500W	P17
SP200VDC1500W	200V	8A	1500W	P17
SP32VDC1600W	32V	50A	1600W	P18
SP40VDC1600W	40V	40A	1600W	P18
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SPS80VDC1000W	80V	60A	1000W	P19
SPS120VDC1000W	120V	40A	1000W	P19
SPS150VDC1000W	150V	30A	1000W	P20
SPS200VDC1000W	200V	24A	1000W	P20
SPS600VDC1000W	600V	10A	1000W	P20
SPS800VDC1000W	800V	7.5A	1000W	P20
SP32VDC2000W	32V	200A	2000W	P21
SP40VDC2000W	40V	120A	2000W	P21
SP80VDC2000W	80V	60A	2000W	P21
SP120VDC2000W	120V	40A	2000W	P21
SP150VDC2000W	150V	30A	2000W	P22
SP200VDC2000W	200V	24A	2000W	P22
SP600VDC2000W	600V	10A	2000W	P22
SP800VDC2000W	800V	7.5A	2000W	P22
SP32VDC3000W	32V	200A	3000W	P23
SP40VDC3000W	40V	120A	3000W	P23
SP80VDC3000W	80V	60A	3000W	P23
SP120VDC3000W	120V	40A	3000W	P23
SP150VDC3000W	150V	30A	3000W	P24
SP200VDC3000W	200V	24A	3000W	P24
SP600VDC3000W	600V	10A	3000W	P24
SP800VDC3000W	800V	7.5A	3000W	P24
SP32VDC4000W	32V	200A	4000W	P25
SP40VDC4000W	40V	120A	4000W	P25
SP75VDC4000W	75V	60A	4000W	P25
SP120VDC4000W	120V	40A	4000W	P25
SP150VDC4000W	150V	30A	4000W	P26
SP200VDC4000W	200V	24A	4000W	P26
SP600VDC4000W	600V	10A	4000W	P26
SP800VDC4000W	800V	7.5A	4000W	P26

# SP-1U/2U Series High Performance Programmable DC Power Supply

## 600W in 1U

Model	SP20VDC600W	SP32VDC600W	SP40VDC600W	SP75VDC600W	SP150VDC600W	SP200VDC600W
<b>Input</b>						
Input Voltage	90~265VAC					
Input Frequency	47~63Hz					
Power Factor	>0.98					
Input Power	750VA(MAX)					
<b>Output</b>						
Output Voltage Range	0~20V	0~32V	0~40V	0~75V	0~150V	0~200V
Output Current Range	0~60A	0~50A	0~40A	0~25A	0~10A	0~8A
Output Power Range	0~600W					
Voltage Load Regulation	10mV	10mV	10mV	10mV	15mV	15mV
Current Load Regulation	60mA	50mA	40mA	25mA	10mA	8mA
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	0.1mV	1mV	1mV
Current Display Resolution	0.2mA	0.2mA	0.2mA	0.2mA	0.2mA	0.1mA
Voltage Programmable Resolution	1.5mV	1.5mV	1.5mV	1.5mV	3mV	3mV
Current Programmable Resolution	2mA	2mA	2mA	1mA	1mA	1mA
Voltage Setting Accuracy <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV
Current Setting Accuracy	0.1%+60mA	0.1%+50mA	0.1%+40mA	0.1%+25mA	0.1%+10mA	0.1%+8mA
Voltage Measurement Accuracy <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV
Current Measurement Accuracy	0.1%+60mA	0.1%+50mA	0.1%+40mA	0.1%+25mA	0.1%+10mA	0.1%+8mA
Voltage Ripple <sup>[2]</sup>	40mVp-p 6mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	120mVp-p 40mVrms	120mVp-p 40mVrms
Current Ripple <sup>[3]</sup>	60mA (Full Range) 20mA (TYP Value)	50mA (Full Range) 20mA (TYP Value)	40mA (Full Range) 20mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.02%+8mV	0.02%+8mV
Line Regulation(Current)	4mA	4mA	4mA	4mA	10mA	30mA
Voltage Temperature Coefficient <sup>[4]</sup>	100ppm/°C					
Current Temperature Coefficient <sup>[4]</sup>	150ppm/°C					
DVM Resolution	0.1mV	0.1mV	0.1mV	0.1mV	4mV	1mV
DVM Precision <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+30mV	0.1%+15mV
Operating Mode	Constant voltage (CV) / Constant current (CC)					
Remote Compensation	4V MAX					
Master-slave Control	Yes					
Response (Voltage Increase)	≤10ms	≤12ms	≤10ms	≤10ms	≤25ms	≤30ms
Response (Voltage Drop)	≤150ms (no load) ≤20ms (full load)	≤150ms (no load) ≤20ms (full load)	≤150ms (no load) ≤20ms (full load)	≤160ms (no load) ≤20ms (full load)	≤400ms (no load) ≤32ms (full load)	≤600ms (no load) ≤30ms (full load)
Load Transient Recovery Time <sup>[5]</sup>	≤2ms	≤2ms	≤2ms	≤2ms	≤3ms	≤3ms
Command Response Time	50ms					
Series Capability <sup>[6]</sup>	Up to 10 units	Up to 10 units	Up to 10 units	Up to 10 units	Up to 8 units	Up to 6 units
Parallel Capability	Up to 10 units					
Current Sharing <sup>[7]</sup>	9V	9V	12V	20V	40V	50V
Efficiency (full load)	85%	86%	87%	88%	88%	87%
<b>Other</b>						
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK					
Anti Reverse Irrigation Protection	Yes					
Input Fuse	20A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type	10A, 125VAC/250VAC, fast-acting type	10A, 125VAC/250VAC, fast-acting type
Unit Weight/Shipping Weight	9.2kg/12kg	9.2kg/12kg	9.2kg/12kg	8.9kg/11.7kg	9.3kg/12.7kg	9.3kg/12.7kg
Dimensions(WxHxD)	423.0x44.0x447.0 mm					
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB					
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.					
Cooling Mode	Forced air-cooling					
Altitude	2000m					
Insulation	AC input ↔ DC output, 4242VDC, AC input ↔ PE, 2121VDC					

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_e < (I_{av} * 2.5 + 5 * F.S) A$ , F.S is the full scale of the current.  $I_{av} = I_{sum} / n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and  $n$  is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# SP-1U/2U Series High Performance Programmable DC Power Supply

## 1000W in 1U

Model	SP20VDC1000W	SP32VDC1000W	SP40VDC1000W	SP75VDC1000W	SP150VDC1000W	SP200VDC1000W
<b>Input</b>						
Input Voltage	90~265VAC					
Input Frequency	47~63Hz					
Power Factor	>0.98					
Input Power	1300VA(MAX)					
<b>Output</b>						
Output Voltage Range	0~20V	0~32V	0~40V	0~75V	0~150V	0~200V
Output Current Range	0~60A	0~50A	0~40A	0~25A	0~10A	0~8A
Output Power Range	0~1000W					
Voltage Load Regulation	10mV	10mV	10mV	10mV	15mV	15mV
Current Load Regulation	60mA	50mA	40mA	25mA	10mA	8mA
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	0.1mV	1mV	1mV
Current Display Resolution	0.2mA	0.2mA	0.2mA	0.2mA	0.2mA	0.1mA
Voltage Programmable Resolution	1.5mV	1.5mV	1.5mV	1.5mV	3mV	3mV
Current Programmable Resolution	2mA	2mA	2mA	1mA	1mA	1mA
Voltage Setting Accuracy <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV
Current Setting Accuracy	0.1%+60mA	0.1%+50mA	0.1%+40mA	0.1%+25mA	0.1%+10mA	0.1%+8mA
Voltage Measurement Accuracy <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV
Current Measurement Accuracy	0.1%+60mA	0.1%+50mA	0.1%+40mA	0.1%+25mA	0.1%+10mA	0.1%+8mA
Voltage Ripple <sup>[2]</sup>	40mVp-p 6mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	120mVp-p 40mVrms	120mVp-p 40mVrms
Current Ripple <sup>[3]</sup>	60mA (Full Range) 20mA (TYP Value)	50mA (Full Range) 20mA (TYP Value)	40mA (Full Range) 20mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.02%+8mV	0.02%+8mV
Line Regulation(Current)	4mA	4mA	4mA	4mA	10mA	30mA
Voltage Temperature Coefficient <sup>[4]</sup>	100ppm/°C					
Current Temperature Coefficient <sup>[4]</sup>	150ppm/°C					
DVM Resolution	0.1mV	0.1mV	0.1mV	0.1mV	4mV	1mV
DVM Precision <sup>[5]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+30mV	0.1%+15mV
Operating Mode	Constant voltage (CV) / Constant current (CC)					
Remote Compensation	4V MAX					
Master-slave Control	Yes					
Response (Voltage Increase)	≤10ms	≤12ms	≤10ms	≤10ms	≤25ms	≤30ms
Response (Voltage Drop)	≤150ms (no load) ≤20ms (full load)	≤150ms (no load) ≤15ms (full load)	≤150ms (no load) ≤15ms (full load)	≤160ms (no load) ≤15ms (full load)	≤400ms (no load) ≤25ms (full load)	≤600ms (no load) ≤40ms (full load)
Load Transient Recovery Time <sup>[6]</sup>	≤2ms	≤2ms	≤2ms	≤2ms	≤3ms	≤3ms
Command Response Time	50ms					
Series Capability <sup>[6]</sup>	Up to 10 units	Up to 10 units	Up to 10 units	Up to 10 units	Up to 8 units	Up to 6 units
Parallel Capability	Up to 10 units					
Current Sharing <sup>[7]</sup>	9V	9V	12V	20V	40V	50V
Efficiency (full load)	85%	89%	89%	89%	89%	87%
<b>Other</b>						
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK					
Anti Reverse Irrigation Protection	Yes					
Input Fuse	20A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type
Unit Weight/Shipping Weight	9.2kg/12kg	9.2kg/12kg	9.2kg/12kg	8.9kg/11.7kg	9.3kg/12.7kg	9.3kg/12.7kg
Dimensions(WxHxD)	423.0x44.0x447.0 mm					
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB					
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.					
Cooling Mode	Forced air-cooling					
Altitude	2000m					
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC					

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_e < (I_{av} * 2.5\% + 5\% F.S) A$ , F.S is the full scale of the current.  $I_{av} = I_{sum} / n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and  $n$  is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# SP-1U/2U Series High Performance Programmable DC Power Supply

## 1200W in 1U

Model	SP20VDC1200W	SP32VDC1200W	SP40VDC1200W	SP75VDC1200W	SP150VDC1200W	SP200VDC1200W
<b>Input</b>						
Input Voltage	90~265VAC					
Input Frequency	47~63Hz					
Power Factor	>0.98					
Input Power	1500VA(MAX)					
<b>Output</b>						
Output Voltage Range	0~20V	0~32V	0~40V	0~75V	0~150V	0~200V
Output Current Range	0~60A	0~50A	0~40A	0~25A	0~10A	0~8A
Output Power Range	0~1200W					
Voltage Load Regulation	10mV	10mV	10mV	10mV	15mV	15mV
Current Load Regulation	60mA	50mA	40mA	25mA	10mA	8mA
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	0.1mV	1mV	1mV
Current Display Resolution	0.2mA	0.2mA	0.2mA	0.2mA	0.2mA	0.1mA
Voltage Programmable Resolution	1.5mV	1.5mV	1.5mV	1.5mV	3mV	3mV
Current Programmable Resolution	2mA	2mA	2mA	1mA	1mA	1mA
Voltage Setting Accuracy <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV
Current Setting Accuracy	0.1%+60mA	0.1%+50mA	0.1%+40mA	0.1%+25mA	0.1%+10mA	0.1%+8mA
Voltage Measurement Accuracy <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV
Current Measurement Accuracy	0.1%+60mA	0.1%+50mA	0.1%+40mA	0.1%+25mA	0.1%+10mA	0.1%+8mA
Voltage Ripple <sup>[2]</sup>	40mVp-p 6mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	120mVp-p 40mVrms	120mVp-p 40mVrms
Current Ripple <sup>[3]</sup>	60mA (Full Range) 20mA (TYP Value)	50mA (Full Range) 20mA (TYP Value)	40mA (Full Range) 20mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.02%+8mV	0.02%+8mV
Line Regulation(Current)	4mA	4mA	4mA	4mA	10mA	30mA
Voltage Temperature Coefficient <sup>[4]</sup>	100ppm/°C					
Current Temperature Coefficient <sup>[4]</sup>	150ppm/°C					
DVM Resolution	0.1mV	0.1mV	0.1mV	0.1mV	4mV	1mV
DVM Precision <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+30mV	0.1%+15mV
Operating Mode	Constant voltage (CV) / Constant current (CC)					
Remote Compensation	4V MAX					
Master-slave Control	Yes					
Response (Voltage Increase)	≤10ms	≤10ms	≤10ms	≤10ms	≤25ms	≤30ms
Response (Voltage Drop)	≤150ms (no load) ≤12ms (full load)	≤150ms (no load) ≤12ms (full load)	≤150ms (no load) ≤12ms (full load)	≤160ms (no load) ≤12ms (full load)	≤400ms (no load) ≤21ms (full load)	≤600ms (no load) ≤36ms (full load)
Load Transient Recovery Time <sup>[5]</sup>	≤2ms	≤2ms	≤2ms	≤2ms	≤3ms	≤3ms
Command Response Time	50ms					
Series Capability <sup>[6]</sup>	Up to 10 units	Up to 10 units	Up to 10 units	Up to 10 units	Up to 8 units	Up to 6 units
Parallel Capability	Up to 10 units					
Current Sharing <sup>[7]</sup>	9V	9V	12V	20V	40V	50V
Efficiency (full load)	84%	84%	89%	90%	89%	90%
<b>Other</b>						
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK					
Anti Reverse Irrigation Protection	Yes					
Input Fuse	20A, 125VAC/250VAC, fast-acting type	20A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type			
Unit Weight/Shipping Weight	9.2kg/12kg	9.2kg/12kg	9.2kg/12kg	8.9kg/11.7kg	9.3kg/12.7kg	9.3kg/12.7kg
Dimensions(WxHxD)	423.0x44.0x447.0 mm					
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB					
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.					
Cooling Mode	Forced air-cooling					
Altitude	2000m					
Insulation	AC input ↔ DC output, 4242VDC, AC input ↔ PE, 2121VDC					

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_e < (I_{av} * 2.5\% + 5\% F.S) A$ , F.S is the full scale of the current.  $I_{av} = I_{sum} / n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and  $n$  is number of parallel units. Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# SP-1U/2U Series High Performance Programmable DC Power Supply

## 1500W in 1U

Model	SP75VDC1500W	SP150VDC1500W	SP200VDC1500W
<b>Input</b>			
Input Voltage	90~265VAC		
Input Frequency	47~63Hz		
Power Factor	>0.98		
Input Power	1900VA(MAX)		
<b>Output</b>			
Output Voltage Range	0~75V	0~150V	0~200V
Output Current Range	0~25A	0~10A	0~8A
Output Power Range	0~1500W		
Voltage Load Regulation	10mV	15mV	15mV
Current Load Regulation	25mA	10mA	8mA
Voltage Display Resolution	0.1mV	1mV	1mV
Current Display Resolution	0.2mA	0.2mA	0.1mA
Voltage Programmable Resolution	1.5mV	3mV	3mV
Current Programmable Resolution	1mA	1mA	1mA
Voltage Setting Accuracy <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV
Current Setting Accuracy	0.1%+25mA	0.1%+10mA	0.1%+8mA
Voltage Measurement Accuracy <sup>[1]</sup>	0.05%+15mV	0.1%+15mV	0.1%+15mV
Current Measurement Accuracy	0.1%+25mA	0.1%+10mA	0.1%+8mA
Voltage Ripple <sup>[2]</sup>	40mVp-p 6mVrms	120mVp-p 40mVrms	120mVp-p 40mVrms
Current Ripple <sup>[3]</sup>	25mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.005%+2mV	0.02%+8mV	0.02%+8mV
Line Regulation(Current)	4mA	10mA	30mA
Voltage Temperature Coefficient <sup>[4]</sup>	100ppm/°C		
Current Temperature Coefficient <sup>[4]</sup>	150ppm/°C		
DVM Resolution	0.1mV	4mV	1mV
DVM Precision <sup>[1]</sup>	0.05%+15mV	0.1%+30mV	0.1%+15mV
Operating Mode	Constant voltage (CV) / Constant current (CC)		
Remote Compensation	4V MAX		
Master-slave Control	Yes		
Response (Voltage Increase)	≤10ms	≤25ms	≤30ms
Response (Voltage Drop)	≤160ms (no load) ≤10ms (full load)	≤400ms (no load) ≤18ms (full load)	≤600ms (no load) ≤30ms (full load)
Load Transient Recovery Time <sup>[5]</sup>	≤2ms	≤3ms	≤3ms
Command Response Time	50ms		
Series Capability <sup>[6]</sup>	Up to 10 units	Up to 8 units	Up to 6 units
Parallel Capability	Up to 10 units		
Current Sharing <sup>[7]</sup>	20V	40V	50V
Efficiency (full load)	91%	90%	91%
<b>Other</b>			
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK		
Anti Reverse Irrigation Protection	Yes		
Input Fuse	30A, 125VAC/250VAC, fast-acting type		
Unit Weight/Shipping Weight	8.9kg/11.7kg	9.3kg/12.7kg	9.3kg/12.7kg
Dimensions(WxHxD)	423.0x44.0x447.0 mm		
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB		
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.		
Cooling Mode	Forced air-cooling		
Altitude	2000m		
Insulation	AC input ↔ DC output, 4242VDC, AC input ↔ PE, 2121VDC		

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_e < (I_{av} * 2.5\% + 5\% F.S) A$ , **F.S** is the full scale of the current.  $I_{av} = I_{sum}/n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and  $n$  is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# SP-1U/2U Series High Performance Programmable DC Power Supply

## 1600W in 1U

Model	SP32VDC1600W	SP40VDC1600W
<b>Input</b>		
Input Voltage	90~265VAC	
Input Frequency	47~63Hz	
Power Factor	>0.98	
Input Power	2000VA(MAX)	
<b>Output</b>		
Output Voltage Range	0~32V	0~40V
Output Current Range	0~50A	0~40A
Output Power Range	0~1600W	
Voltage Load Regulation	10mV	
Current Load Regulation	50mA	40mA
Voltage Display Resolution	0.1mV	
Current Display Resolution	0.2mA	
Voltage Programmable Resolution	1.5mV	
Current Programmable Resolution	2mA	
Voltage Setting Accuracy <sup>[1]</sup>	0.05%+15mV	
Current Setting Accuracy	0.1%+50mA	0.1%+40mA
Voltage Measurement Accuracy <sup>[1]</sup>	0.05%+15mV	
Current Measurement Accuracy	0.1%+50mA	0.1%+40mA
Voltage Ripple <sup>[2]</sup>	40mVp-p 6mVrms	
Current Ripple <sup>[3]</sup>	50mA (Full Range) 20mA (TYP Value)	40mA (Full Range) 20mA (TYP Value)
Line Regulation(Voltage)	0.005%+1mV	
Line Regulation(Current)	4mA	
Voltage Temperature Coefficient <sup>[4]</sup>	100ppm/°C	
Current Temperature Coefficient <sup>[4]</sup>	150ppm/°C	
DVM Resolution	0.1mV	
DVM Precision <sup>[1]</sup>	0.05%+15mV	
Operating Mode	Constant voltage (CV) / Constant current (CC)	
Remote Compensation	4V MAX	
Master-slave Control	Yes	
Response (Voltage Increase)	≤12ms	≤10ms
Response (Voltage Drop)	≤150ms (no load) ≤10ms (full load)	
Load Transient Recovery Time <sup>[5]</sup>	≤2ms	
Command Response Time	50ms	
Series Capability <sup>[6]</sup>	Up to 10 units	
Parallel Capability	Up to 10 units	
Current Sharing <sup>[7]</sup>	9V	12V
Efficiency (full load)	89%	90%
<b>Other</b>		
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK	
Anti Reverse Irrigation Protection	Yes	
Input Fuse	30A, 125VAC/250VAC, fast-acting type	
Unit Weight/Shipping Weight	9.2kg/12kg	
Dimensions(WxHxD)	423.0x44.0x447.0 mm	
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB	
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.	
Cooling Mode	Forced air-cooling	
Altitude	2000m	
Insulation	AC input <-> DC output, 4242VDC, AC input <-> PE, 2121VDC	

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_e < (I_{av} * 2.5\% + 5\% FS) A$ , FS is the full scale of the current.  $I_{av} = I_{sum} / n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and n is number of parallel units. Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# SP-1U/2U Series High Performance Programmable DC Power Supply

## 1000W in 2U(1)

Model	SPS32VDC1000W	SPS40VDC1000W	SPS80VDC1000W	SPS120VDC1000W
<b>Input</b>				
Input Voltage	90~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98	>0.98	>0.97	>0.98
Input Power	1500VA(MAX)	1300VA(MAX)	1200VA(MAX)	1300VA(MAX)
<b>Output</b>				
Output Voltage Range	0~32V	0~40V	0~80V	0~120V
Output Current Range	0~200A	0~120A	0~60A	0~40A
Output Power Range	0~1000W			
Voltage Load Regulation	30mV	15mV	15mV	15mV
Current Load Regulation	200mA	120mA	60mA	40mA
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	1mV
Current Display Resolution	1mA	1mA	0.2mA	0.1mA
Voltage Programmable Resolution	1mV	1mV	1.5mV	3mV
Current Programmable Resolution	6mA	3mA	2mA	1mA
Voltage Setting Accuracy <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV
Current Setting Accuracy	0.1%+200mA	0.1%+120mA	0.1%+60mA	0.1%+40mA
Voltage Measurement Accuracy <sup>[2]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV
Current Measurement Accuracy	0.1%+200mA	0.1%+120mA	0.1%+60mA	0.1%+40mA
Voltage Ripple <sup>[3]</sup>	60mVp-p 10mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	80mVp-p 15mVrms
Current Ripple <sup>[3]</sup>	400mA (Full Range) 200mA (TYP Value)	150mA (Full Range) 20mA (TYP Value)	50mA (Full Range) 10mA (TYP Value)	60mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.01%+8mV	0.02%+8mV	0.01%+8mV	0.02%+8mV
Line Regulation(Current)	200mA	30mA	30mA	40mA
Voltage Temperature Coefficient <sup>[4]</sup>	100ppm/°C			
Current Temperature Coefficient <sup>[4]</sup>	150ppm/°C			
DVM Resolution	0.1mV	0.1mV	0.1mV	1mV
DVM Precision <sup>[4]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV
Operating Mode	Constant voltage (CV) / Constant current (CC)			
Remote Compensation	4V MAX	4V MAX	4V MAX	5V MAX
Master-slave Control	Yes			
Response (Voltage Increase)	≤20ms (no load) ≤40ms (full load)	≤10ms	≤15ms	≤20ms
Response (Voltage Drop)	≤500ms (no load) ≤45ms (full load)	≤350ms (no load) ≤10ms (full load)	≤450ms (no load) ≤30ms (full load)	≤350ms (no load) ≤21ms (full load)
Load Transient Recovery Time <sup>[5]</sup>	≤2ms			
Command Response Time	50ms			
Series Capability <sup>[6]</sup>	Up to 10 units			
Parallel Capability	Up to 10 units			
Current Sharing <sup>[7]</sup>	12V	12V	20V	30V
Efficiency (full load)	85%	87%	89%	88%
<b>Other</b>				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	No(customers can purchase other accessories to achieve this function, please consult the sales representative for details)	Yes	Yes	Yes
Input Fuse	20A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type
Unit Weight/Shipping Weight	14.7kg/18.7kg	14.7kg/18.7kg	13.2kg/16.8kg	13.2kg/16.8kg
Dimensions(WxHxD)	423.0x87.0x514.0 mm	423.0x87.0x514.0 mm	423.0x87.0x469.0 mm	423.0x87.0x469.0 mm
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB			
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.			
Cooling Mode	Forced air-cooling			
Altitude	2000m			
Insulation	AC input ↔ DC output, 4242VDC, AC input ↔ PE, 2121VDC			

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_{e} < (I_{av} * 2.5\% + 5\% F.S) A$ , **F.S** is the full scale of the current.  $I_{av} = I_{sum} / n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and  $n$  is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# SP-1U/2U Series High Performance Programmable DC Power Supply

## 1000W in 2U(2)

Model	SPS150VDC1000W	SPS200VDC1000W	SPS600VDC1000W	SPS800VDC1000W
<b>Input</b>				
Input Voltage	90~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98			
Input Power	1300VA(MAX)			
<b>Output</b>				
Output Voltage Range	0~150V	0~200V	0~600V	0~800V
Output Current Range	0~30A	0~24A	0~10A	0~7.5A
Output Power Range	0~1000W			
Voltage Load Regulation	15mV	15mV	30mV	200mV
Current Load Regulation	30mA	24mA	10mA	20mA
Voltage Display Resolution	1mV			
Current Display Resolution	0.1mA			
Voltage Programmable Resolution	3mV	4mV	12mV	24mV
Current Programmable Resolution	1mA			
Voltage Setting Accuracy <sup>[1]</sup>	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Current Setting Accuracy	0.1%+30mA	0.1%+24mA	0.1%+10mA	0.1%+7.5mA
Voltage Measurement Accuracy <sup>[1]</sup>	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Current Measurement Accuracy	0.1%+30mA	0.1%+24mA	0.1%+10mA	0.1%+7.5mA
Voltage Ripple <sup>[2]</sup>	80mVp-p 15mVrms	150mVp-p 30mVrms	350mVp-p 40mVrms	800mVp-p 200mVrms
Current Ripple <sup>[3]</sup>	60mA (Full Range) 10mA (TYP Value)	50mA (Full Range) 20mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.02%+8mV	0.02%+8mV	0.01%+30mV	0.01%+40mV
Line Regulation(Current)	30mA	30mA	15mA	15mA
Voltage Temperature Coefficient <sup>[4]</sup>	100ppm/°C			
Current Temperature Coefficient <sup>[4]</sup>	150ppm/°C			
DVM Resolution	1mV	1mV	12mV	12mV
DVM Precision <sup>[1]</sup>	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Operating Mode	Constant voltage (CV) / Constant current (CC)			
Remote Compensation	5V MAX			
Master-slave Control	Yes			
Response (Voltage Increase)	≤25ms	≤30ms	≤60ms	≤60ms
Response (Voltage Drop)	≤500ms (no load) ≤25ms (full load)	≤500ms (no load) ≤35ms (full load)	≤800ms (no load) ≤110ms (full load)	≤800ms (no load) ≤60ms (full load)
Load Transient Recovery Time <sup>[5]</sup>	≤2ms	≤2ms	≤3ms	≤3ms
Command Response Time	50ms			
Series Capability <sup>[6]</sup>	Up to 8 units	Up to 6 units	Up to 2 units	Not Recommended
Parallel Capability	Up to 10 units			
Current Sharing <sup>[7]</sup>	40V	50V	200V	250V
Efficiency (full load)	88%	88%	86%	85%
<b>Other</b>				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	Yes			
Input Fuse	30A, 125VAC/250VAC, fast-acting type			
Unit Weight/Shipping Weight	13.2kg/16.8kg	14.7kg/18.7kg	13.2kg/16.8kg	13.2kg/16.8kg
Dimensions(WxHxD)	423.0x87.0x469.0 mm	423.0x87.0x469.0 mm	423.0x87.0x514.0 mm	423.0x87.0x514.0 mm
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB			
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.			
Cooling Mode	Forced air-cooling			
Altitude	2000m			
Insulation	AC input ↔ DC output, 4242VDC, AC input ↔ PE, 2121VDC			

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_e < (I_{av} * 2.5\% + 5\% FS) A$ , FS is the full scale of the current.  $I_{av} = I_{sum}/n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and n is number of parallel units. Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# SP-1U/2U Series High Performance Programmable DC Power Supply

## 2000W in 2U(1)

Model	SP32VDC2000W	SP40VDC2000W	SP80VDC2000W	SP120VDC2000W
<b>Input</b>				
Input Voltage	190~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98			
Input Power	2600VA(MAX)	2400VA(MAX)	2400VA(MAX)	2400VA(MAX)
<b>Output</b>				
Output Voltage Range	0~32V	0~40V	0~80V	0~120V
Output Current Range	0~200A	0~120A	0~60A	0~40A
Output Power Range	0~2000W			
Voltage Load Regulation	30mV	15mV	15mV	15mV
Current Load Regulation	200mA	120mA	60mA	40mA
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	1mV
Current Display Resolution	1mA	1mA	0.2mA	0.1mA
Voltage Programmable Resolution	1mV	1mV	1.5mV	3mV
Current Programmable Resolution	6mA	3mA	2mA	1mA
Voltage Setting Accuracy <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV
Current Setting Accuracy	0.1%+200mA	0.1%+120mA	0.1%+60mA	0.1%+40mA
Voltage Measurement Accuracy <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV
Current Measurement Accuracy	0.1%+200mA	0.1%+120mA	0.1%+60mA	0.1%+40mA
Voltage Ripple <sup>[2]</sup>	60mVp-p 10mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	80mVp-p 15mVrms
Current Ripple <sup>[3]</sup>	400mA (Full Range) 200mA (TYP Value)	150mA (Full Range) 20mA (TYP Value)	50mA (Full Range) 10mA (TYP Value)	60mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.01%+8mV	0.01%+8mV	0.01%+8mV	0.02%+8mV
Line Regulation(Current)	200mA	30mA	30mA	30mA
Voltage Temperature Coefficient <sup>[4]</sup>	100ppm/°C			
Current Temperature Coefficient <sup>[4]</sup>	150ppm/°C			
DVM Resolution	0.1mV	0.1mV	0.1mV	1mV
DVM Precision <sup>[5]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV
Operating Mode	Constant voltage (CV) / Constant current (CC)			
Remote Compensation	4V MAX	4V MAX	4V MAX	5V MAX
Master-slave Control	Yes			
Response (Voltage Increase)	≤20ms (no load) ≤30ms (full load)	≤10ms	≤15ms	≤20ms
Response (Voltage Drop)	≤500ms (no load) ≤30ms (full load)	≤350ms (no load) ≤10ms (full load)	≤450ms (no load) ≤30ms (full load)	≤350ms (no load) ≤21ms (full load)
Load Transient Recovery Time <sup>[6]</sup>	≤2ms	≤2ms	≤2ms	≤3ms
Command Response Time	50ms			
Series Capability <sup>[6]</sup>	Up to 10 units	Up to 10 units	Up to 10 units	Up to 8 units
Parallel Capability	Up to 10 units			
Current Sharing <sup>[7]</sup>	12V	12V	20V	30V
Efficiency (full load)	91%	88%	89%	89%
<b>Other</b>				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	No(customers can purchase other accessories to achieve this function, please consult the salesrepresentative for details)	Yes	Yes	Yes
Input Fuse	20A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type
Unit Weight/Shipping Weight	14.7kg/18.7kg	14.7kg/18.7kg	13.2kg/16.8kg	13.2kg/16.8kg
Dimensions(WxHxD)	423.0x87.0x514.0 mm	423.0x87.0x514.0 mm	423.0x87.0x469.0 mm	423.0x87.0x469.0 mm
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB			
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.			
Cooling Mode	Forced air-cooling			
Altitude	2000m			
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC			

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_e < (I_{av} \times 2.5\% + 5\% F.S) A$ , **F.S** is the full scale of the current.  $I_{av} = I_{sum}/n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and  $n$  is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# SP-1U/2U Series High Performance Programmable DC Power Supply

## 2000W in 2U(2)

Model	SP150VDC2000W	SP200VDC2000W	SP600VDC2000W	SP800VDC2000W
<b>Input</b>				
Input Voltage	190~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98			
Input Power	2400VA(MAX)			
<b>Output</b>				
Output Voltage Range	0~150V	0~200V	0~600V	0~800V
Output Current Range	0~30A	0~24A	0~10A	0~7.5A
Output Power Range	0~2000W			
Voltage Load Regulation	15mV	15mV	30mV	200mV
Current Load Regulation	30mA	24mA	10mA	20mA
Voltage Display Resolution	1mV			
Current Display Resolution	0.1mA			
Voltage Programmable Resolution	3mV	4mV	12mV	24mV
Current Programmable Resolution	1mA			
Voltage Setting Accuracy <sup>[1]</sup>	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Current Setting Accuracy	0.1%+30mA	0.1%+24mA	0.1%+10mA	0.1%+7.5mA
Voltage Measurement Accuracy <sup>[1]</sup>	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Current Measurement Accuracy	0.1%+30mA	0.1%+24mA	0.1%+10mA	0.1%+7.5mA
Voltage Ripple <sup>[2]</sup>	40mVp-p 6mVrms	150mVp-p 30mVrms	350mVp-p 40mVrms	800mVp-p 200mVrms
Current Ripple <sup>[3]</sup>	60mA (Full Range) 10mA (TYP Value)	50mA (Full Range) 20mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.02%+8mV	0.02%+8mV	0.01%+30mV	0.01%+40mV
Line Regulation(Current)	30mA	30mA	15mA	20mA
Voltage Temperature Coefficient <sup>[4]</sup>	100ppm/°C			
Current Temperature Coefficient <sup>[4]</sup>	150ppm/°C			
DVM Resolution	1mV	1mV	12mV	12mV
DVM Precision <sup>[1]</sup>	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Operating Mode	Constant voltage (CV) / Constant current (CC)			
Remote Compensation	5V MAX			
Master-slave Control	Yes			
Response (Voltage Increase)	≤25ms	≤30ms	≤60ms	≤60ms
Response (Voltage Drop)	≤500ms (no load) ≤25ms (full load)	≤500ms (no load) ≤20ms (full load)	≤800ms (no load) ≤90ms (full load)	≤800ms (no load) ≤60ms (full load)
Load Transient Recovery Time <sup>[5]</sup>	≤3ms			
Command Response Time	50ms			
Series Capability <sup>[6]</sup>	Up to 8 units	Up to 6 units	Up to 2 units	Not Recommended
Parallel Capability	Up to 10 units			
Current Sharing <sup>[7]</sup>	40V	50V	200V	250V
Efficiency (full load)	90%	90%	90%	91%
<b>Other</b>				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	Yes			
Input Fuse	30A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type	20A, 125VAC/250VAC, fast-acting type	20A, 125VAC/250VAC, fast-acting type
Unit Weight/Shipping Weight	13.2kg/16.8kg	13.2kg/16.8kg	14.7kg/18.7kg	14.7kg/18.7kg
Dimensions(WxHxD)	423.0x87.0x469.0 mm	423.0x87.0x469.0 mm	423.0x87.0x514.0 mm	423.0x87.0x514.0 mm
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB			
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.			
Cooling Mode	Forced air-cooling			
Altitude	2000m			
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC			

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_e < (I_{av} * 2.5\% + 5\% F.S) A$ , F.S is the full scale of the current.  $I_{av} = I_{sum}/n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and n is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# SP-1U/2U Series High Performance Programmable DC Power Supply

## ■ 3000W in 2U(1)

Model	SP32VDC3000W	SP40VDC3000W	SP80VDC3000W	SP120VDC3000W
<b>Input</b>				
Input Voltage	190~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98			
Input Power	3700VA(MAX)	3400VA(MAX)	3400VA(MAX)	3400VA(MAX)
<b>Output</b>				
Output Voltage Range	0~32V	0~40V	0~80V	0~120V
Output Current Range	0~200A	0~120A	0~60A	0~40A
Output Power Range	0~3000W			
Voltage Load Regulation	30mV	15mV	15mV	15mV
Current Load Regulation	200mA	120mA	60mA	40mA
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	1mV
Current Display Resolution	1mA	1mA	0.2mA	0.1mA
Voltage Programmable Resolution	1mV	1mV	1.5mV	3mV
Current Programmable Resolution	6mA	2mA	2mA	1mA
Voltage Setting Accuracy <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV
Current Setting Accuracy	0.1%+200mA	0.1%+120mA	0.1%+60mA	0.1%+40mA
Voltage Measurement Accuracy <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV
Current Measurement Accuracy	0.1%+200mA	0.1%+120mA	0.1%+60mA	0.1%+40mA
Voltage Ripple <sup>[2]</sup>	60mVp-p 10mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	80mVp-p 15mVrms
Current Ripple <sup>[3]</sup>	400mA (Full Range) 200mA (TYP Value)	150mA (Full Range) 20mA (TYP Value)	50mA (Full Range) 10mA (TYP Value)	60mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.01%+8mV	0.01%+8mV	0.01%+8mV	0.02%+8mV
Line Regulation(Current)	200mA	30mA	30mA	30mA
Voltage Temperature Coefficient <sup>[4]</sup>	100ppm/°C			
Current Temperature Coefficient <sup>[4]</sup>	150ppm/°C			
DVM Resolution	0.1mV	0.1mV	0.1mV	1mV
DVM Precision <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV
Operating Mode	Constant voltage (CV) / Constant current (CC)			
Remote Compensation	4V MAX	4V MAX	4V MAX	5V MAX
Master-slave Control	Yes			
Response (Voltage Increase)	≤20ms (no load) ≤20ms (full load)	≤10ms	≤15ms	≤20ms
Response (Voltage Drop)	≤500ms (no load) ≤25ms (full load)	≤350ms (no load) ≤10ms (full load)	≤450ms (no load) ≤30ms (full load)	≤350ms (no load) ≤21ms (full load)
Load Transient Recovery Time <sup>[5]</sup>	≤2ms			
Command Response Time	50ms			
Series Capability <sup>[6]</sup>	Up to 10 units			
Parallel Capability	Up to 10 units			
Current Sharing <sup>[7]</sup>	12V	12V	20V	30V
Efficiency (full load)	91%	88%	91%	91%
<b>Other</b>				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	No(customers can purchase other accessories to achieve this function, please consult the salesrepresentative for details)	Yes	Yes	Yes
Input Fuse	30A, 125VAC/250VAC, fast-acting type	40A, 125VAC/250VAC, fast-acting type	40A, 125VAC/250VAC, fast-acting type	40A, 125VAC/250VAC, fast-acting type
Unit Weight/Shipping Weight	14.7kg/18.7kg	14.7kg/18.7kg	13.2kg/16.8kg	13.2kg/16.8kg
Dimensions(WxHxD)	423.0x87.0x514.0 mm	423.0x87.0x514.0 mm	423.0x87.0x469.0 mm	423.0x87.0x469.0 mm
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB			
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.			
Cooling Mode	Forced air-cooling			
Altitude	2000m			
Insulation	AC input ↔DC output, 4242VDC, AC input ↔ PE, 2121VDC			

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_{e} < (I_{av} * 2.5\% + 5\% F.S) A$ , **F.S** is the full scale of the current.  $I_{av} = I_{sum} / n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and  $n$  is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# SP-1U/2U Series High Performance Programmable DC Power Supply

## 3000W in 2U(2)

Model	SP150VDC3000W	SP200VDC3000W	SP600VDC3000W	SP800VDC3000W
<b>Input</b>				
Input Voltage	190~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98			
Input Power	3400VA(MAX)			
<b>Output</b>				
Output Voltage Range	0~150V	0~200V	0~600V	0~800V
Output Current Range	0~30A	0~24A	0~10A	0~7.5A
Output Power Range	0~3000W			
Voltage Load Regulation	15mV	15mV	30mV	200mV
Current Load Regulation	30mA	24mA	10mA	20mA
Voltage Display Resolution	1mV			
Current Display Resolution	0.1mA			
Voltage Programmable Resolution	3mV	4mV	12mV	24mV
Current Programmable Resolution	1mA			
Voltage Setting Accuracy <sup>[1]</sup>	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Current Setting Accuracy	0.1%+30mA	0.1%+24mA	0.1%+10mA	0.1%+7.5mA
Voltage Measurement Accuracy <sup>[1]</sup>	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Current Measurement Accuracy	0.1%+30mA	0.1%+24mA	0.1%+10mA	0.1%+7.5mA
Voltage Ripple <sup>[2]</sup>	80mVp-p 15mVrms	150mVp-p 30mVrms	350mVp-p 40mVrms	800mVp-p 200mVrms
Current Ripple <sup>[3]</sup>	60mA (Full Range) 10mA (TYP Value)	50mA (Full Range) 20mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.02%+8mV	0.02%+8mV	0.01%+30mV	0.01%+40mV
Line Regulation(Current)	30mA	30mA	15mA	20mA
Voltage Temperature Coefficient <sup>[4]</sup>	100ppm/°C			
Current Temperature Coefficient <sup>[4]</sup>	150ppm/°C			
DVM Resolution	1mV	1mV	12mV	12mV
DVM Precision <sup>[1]</sup>	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Operating Mode	Constant voltage (CV) / Constant current (CC)			
Remote Compensation	5V MAX			
Master-slave Control	Yes			
Response (Voltage Increase)	≤25ms	≤30ms	≤60ms	≤60ms
Response (Voltage Drop)	≤500ms (no load) ≤25ms (full load)	≤500ms (no load) ≤20ms (full load)	≤800ms (no load) ≤75ms (full load)	≤800ms (no load) ≤60ms (full load)
Load Transient Recovery Time <sup>[5]</sup>	≤2.5ms	≤3ms	≤3ms	≤3ms
Command Response Time	50ms			
Series Capability <sup>[6]</sup>	Up to 8 units	Up to 6 units	Up to 2 units	Not Recommended
Parallel Capability	Up to 10 units			
Current Sharing <sup>[7]</sup>	40V	50V	200V	250V
Efficiency (full load)	92%	91%	91%	91%
<b>Other</b>				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	Yes			
Input Fuse	40A, 125VAC/250VAC, fast-acting type	40A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VAC, fast-acting type
Unit Weight/Shipping Weight	13.2kg/16.8kg	13.2kg/16.8kg	14.7kg/18.7kg	14.7kg/18.7kg
Dimensions(WxHxD)	423.0x87.0x469.0 mm	423.0x87.0x469.0 mm	423.0x87.0x514.0 mm	423.0x87.0x514.0 mm
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB			
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.			
Cooling Mode	Forced air-cooling			
Altitude	2000m			
Insulation	AC input <->DC output, 424VDC, AC input <-> PE, 2121VDC			

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $le<(\mathit{lav} * 2.5\% + 5\% \mathit{FS}) \mathit{A}$ ,  $\mathit{FS}$  is the full scale of the current.  $\mathit{lav} = \mathit{Isum} / \mathit{n}$ , where  $\mathit{lav}$  is average current,  $\mathit{Isum}$  is total current and  $\mathit{n}$  is number of parallel units. Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# SP-1U/2U Series High Performance Programmable DC Power Supply

## 4000W in 2U(1)

Model	SP32VDC4000W	SP40VDC4000W	SP75VDC4000W	SP120VDC4000W
<b>Input</b>				
Input Voltage	190~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98			
Input Power	4800VA(MAX)	4500VA(MAX)	4500VA(MAX)	4500VA(MAX)
<b>Output</b>				
Output Voltage Range	0~32V	0~40V	0~75V	0~120V
Output Current Range	0~200A	0~120A	0~60A	0~40A
Output Power Range	0~4000W			
Voltage Load Regulation	30mV	15mV	15mV	15mV
Current Load Regulation	200mA	120mA	60mA	40mA
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	1mV
Current Display Resolution	1mA	1mA	0.1mA	0.1mA
Voltage Programmable Resolution	1mV	1mV	2mV	3mV
Current Programmable Resolution	6mA	3mA	2mA	1mA
Voltage Setting Accuracy <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV
Current Setting Accuracy	0.1%+200mA	0.1%+120mA	0.1%+60mA	0.1%+40mA
Voltage Measurement Accuracy <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV
Current Measurement Accuracy	0.1%+200mA	0.1%+120mA	0.1%+60mA	0.1%+40mA
Voltage Ripple <sup>[2]</sup>	60mVp-p 10mVrms	40mVp-p 6mVrms	40mVp-p 8mVrms	80mVp-p 15mVrms
Current Ripple <sup>[3]</sup>	400mA (Full Range) 200mA (TYP Value)	150mA (Full Range) 20mA (TYP Value)	60mA (Full Range) 10mA (TYP Value)	60mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.01%+8mV	0.01%+8mV	0.01%+8mV	0.02%+8mV
Line Regulation(Current)	200mA	30mA	30mA	30mA
Voltage Temperature Coefficient <sup>[4]</sup>	100ppm/°C			
Current Temperature Coefficient <sup>[4]</sup>	150ppm/°C			
DVM Resolution	0.1mV	0.1mV	0.1mV	1mV
DVM Precision <sup>[1]</sup>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV
Operating Mode	Constant voltage (CV) / Constant current (CC)			
Remote Compensation	4V MAX	4V MAX	5V MAX	5V MAX
Master-slave Control	Yes			
Response (Voltage Increase)	≤20ms (no load) ≤20ms (full load)	≤10ms	≤15ms	≤20ms
Response (Voltage Drop)	≤500ms (no load) ≤20ms (full load)	≤350ms (no load) ≤10ms (full load)	≤450ms (no load) ≤20ms (full load)	≤350ms (no load) ≤21ms (full load)
Load Transient Recovery Time <sup>[5]</sup>	≤2ms			
Command Response Time	50ms			
Series Capability <sup>[6]</sup>	Up to 10 units			
Parallel Capability	Up to 10 units			
Current Sharing <sup>[7]</sup>	12V	12V	20V	30V
Efficiency (full load)	91%	91%	91%	92%
<b>Other</b>				
Protection Function	OVP/OCV/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	No(customers can purchase other accessories to achieve this function, please consult the salesrepresentative for details)	Yes	Yes	Yes
Input Fuse	40A, 125VAC/250VAC, fast-acting type			
Unit Weight/Shipping Weight	14.7kg/18.7kg	14.7kg/18.7kg	13.2kg/16.8kg	13.2kg/16.8kg
Dimensions(WxHxD)	423.0x87.0x514.0 mm	423.0x87.0x514.0 mm	423.0x87.0x469.0 mm	423.0x87.0x469.0 mm
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB			
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.			
Cooling Mode	Forced air-cooling			
Altitude	2000m			
Insulation	AC input ->-DC output, 4242VDC, AC input ->- PE, 2121VDC			

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_e < (I_{av} \times 2.5\% + 5\% \text{ F.S}) A$ , **F.S** is the full scale of the current.  $I_{av} = I_{sum}/n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and  $n$  is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# SP-1U/2U Series High Performance Programmable DC Power Supply

## 4000W in 2U(2)

Model	SP150VDC4000W	SP200VDC4000W	SP600VDC4000W	SP800VDC4000W
<b>Input</b>				
Input Voltage	190~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98			
Input Power	4500VA(MAX)			
<b>Output</b>				
Output Voltage Range	0~150V	0~200V	0~600V	0~800V
Output Current Range	0~30A	0~24A	0~10A	0~7.5A
Output Power Range	0~4000W			
Voltage Load Regulation	15mV	25mV	30mV	200mV
Current Load Regulation	30mA	24mA	10mA	20mA
Voltage Display Resolution	1mV			
Current Display Resolution	0.1mA			
Voltage Programmable Resolution	3mV	4mV	12mV	24mV
Current Programmable Resolution	1mA			
Voltage Setting Accuracy <sup>[1]</sup>	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Current Setting Accuracy	0.1%+30mA	0.1%+24mA	0.1%+10mA	0.1%+7.5mA
Voltage Measurement Accuracy <sup>[1]</sup>	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Current Measurement Accuracy	0.1%+30mA	0.1%+24mA	0.1%+10mA	0.1%+7.5mA
Voltage Ripple <sup>[2]</sup>	80mVp-p 15mVrms	150mVp-p 30mVrms	350mVp-p 40mVrms	800mVp-p 200mVrms
Current Ripple <sup>[3]</sup>	60mA (Full Range) 10mA (TYP Value)	50mA (Full Range) 20mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.02%+8mV	0.02%+8mV	0.01%+30mV	0.01%+40mV
Line Regulation(Current)	30mA	30mA	15mA	20mA
Voltage Temperature Coefficient <sup>[4]</sup>	100ppm/°C			
Current Temperature Coefficient <sup>[4]</sup>	150ppm/°C			
DVM Resolution	1mV	1mV	12mV	12mV
DVM Precision <sup>[1]</sup>	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Operating Mode	Constant voltage (CV) / Constant current (CC)			
Remote Compensation	5V MAX			
Master-slave Control	Yes			
Response (Voltage Increase)	≤25ms	≤30ms	≤60ms	≤60ms
Response (Voltage Drop)	≤500ms (no load) ≤25ms (full load)	≤500ms (no load) ≤20ms (full load)	≤800ms (no load) ≤60ms (full load)	≤800ms (no load) ≤60ms (full load)
Load Transient Recovery Time <sup>[5]</sup>	≤2.5ms	≤3ms	≤3ms	≤3ms
Command Response Time	50ms			
Series Capability <sup>[6]</sup>	Up to 8 units	Up to 6 units	Up to 2 units	Not Recommended
Parallel Capability	Up to 10 units			
Current Sharing <sup>[7]</sup>	40V	50V	200V	250V
Efficiency (full load)	93%	92%	92%	92%
<b>Other</b>				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	Yes			
Input Fuse	40A, 125VAC/250VAC, fast-acting type			
Unit Weight/Shipping Weight	13.2kg/16.8kg	13.2kg/16.8kg	14.7kg/18.7kg	14.7kg/18.7kg
Dimensions(WxHxD)	423.0x87.0x469.0 mm	423.0x87.0x469.0 mm	423.0x87.0x514.0 mm	423.0x87.0x514.0 mm
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB			
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.			
Cooling Mode	Forced air-cooling			
Altitude	2000m			
Insulation	AC input ↔ DC output, 4242VDC, AC input ↔ PE, 2121VDC			

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_e < (I_{av} * 2.5\% + 5\% F.S) A$ , F.S is the full scale of the current.  $I_{av} = I_{sum} / n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and n is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

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## SPS Series DC Power Supply System

### Selection List:

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SPS32VDC24000W-2-19		1200A	24kW	19U	P29
SPS32VDC40000W-2-27		2000A	40kW	27U	P29
SPS40VDC12000W-2-13	40V	360A	12kW	13U	P30
SPS40VDC24000W-2-19		720A	24kW	19U	P30
SPS40VDC40000W-2-27		1200A	40kW	27U	P30
SPS75VDC12000W-2-13	75V	180A	12kW	13U	P31
SPS75VDC24000W-2-19		360A	24kW	19U	P31
SPS75VDC40000W-2-27		600A	40kW	27U	P31
SPS80VDC9000W-2-13	80V	180A	9kW	13U	P32
SPS80VDC18000W-2-19		360A	18kW	19U	P32
SPS80VDC30000W-2-27		600A	30kW	27U	P32
SPS96VDC12000W-2-13	96V	200A	12kW	13U	P33
SPS120VDC12000W-2-13	120V	120A	12kW	13U	P34
SPS120VDC24000W-2-19		240A	24kW	19U	P34
SPS120VDC40000W-2-27		400A	40kW	27U	P34
SPS150VDC12000W-2-13	150V	90A	12kW	13U	P35
SPS150VDC24000W-2-19		180A	24kW	19U	P35
SPS150VDC40000W-2-27		300A	40kW	27U	P35
SPS192VDC24000W-2-29	192V	200A	24kW	19U	P36
SPS200VDC12000W-2-13	200V	72A	12kW	13U	P37
SPS200VDC24000W-2-19		144A	24kW	19U	P37
SPS200VDC40000W-2-27		240A	40kW	27U	P37
SPS225VDC12000W-2-13	225V	60A	12kW	13U	P38
SPS240VDC9000W-2-13	240V	60A	9kW	13U	P39
SPS240VDC24000W-2-19		120A	24kW	19U	P39
SPS320VDC40000W-2-27	320V	200A	40kW	27U	P40
SPS360VDC12000W-2-13	360V	40A	12kW	13U	P41
SPS400VDC40000W-2-27	400V	120A	40kW	27U	P42
SPS450VDC12000W-2-13	450V	30A	12kW	13U	P43
SPS450VDC24000W-2-19		60A	24kW	19U	P43
SPS480VDC18000W-2-19	480V	60A	18kW	19U	P44
SPS600VDC12000W-2-13	600V	30A	12kW	13U	P45
SPS600VDC24000W-2-19		60A	24kW	19U	P45
SPS600VDC40000W-2-27		100A	40kW	27U	P45
SPS720VDC24000W-2-19	720V	40A	24kW	19U	P46
SPS750VDC40000W-2-27	750V	60A	40kW	27U	P47
SPS800VDC12000W-2-13	800V	22.5A	12kW	13U	P48
SPS800VDC24000W-2-19		45A	24kW	19U	P48
SPS800VDC30000W-2-27		60A	30kW	27U	P48
SPS800VDC40000W-2-27		75A	40kW	27U	P48
SPS900VDC24000W-2-19	900V	30A	24kW	19U	P49
SPS1200VDC24000W-2-19	1200V	24A	24kW	19U	P50
SPS1200VDC40000W-2-27		40A	40kW	27U	P50

\*This formula is the standard cabinet for SP-2U model; it is available to select cabinet with different specification according to exact situation.

**SPS32VDC**

MODEL	SPS32VDC12000W-2-13		SPS32VDC24000W-2-19	SPS32VDC40000W-2-27
<b>Input</b>				
Voltage	190~265VAC			
Frequency	47~63Hz			
Phase	3 Phase, 4Wire+Groud/Y Connect			
Max.Current	75A	150A	250A	
Input Power Max	15kW	28.5kW	47.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC			
Efficiency	>88% Max @Full Load and Units=4kW Model			
<b>Output</b>				
Output Voltage	0~32V			
Output Current	0~600A	0~1200A	0~2000A	
Output Power	12kW Max	24kW Max	40kW Max	
Load Regulation	Voltage	90mV	180mV	300mV
	Current	0.6A	1.2A	2A
Line Regulation	Voltage	0.02%F.S.+30mV		
	Current	0.02%F.S.+15mA		
Voltage Setting	Range	0~32V		
	Resolution	0.1mV		
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc		
Current Setting	Range	0~600A	0~1200A	0~2000A
	Resolution	10mA	0.1A	0.1A
	Accuracy	0.1%+0.10%F.S		
Ripple	Voltage	120mVp-p/20mVrms		
	Current	600mA(Full Range)	1200mA(Full Range)	2000mA(Full Range)
		300mA(TYP Value)	600mA(TYP Value)	1000mA(TYP Value)
<b>Measurement</b>				
Voltage Setting	Range	0~32V		
	Resolution	0.1mV		
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc		
Current Setting	Range	0~600A	0~1200A	0~2000A
	Resolution	10mA	0.1A	0.1A
	Accuracy	0.1%+0.10%F.S		
<b>Extra Function</b>				
Remote Sense	Range	4V(DC), Max. Total power less than rated power		
Comm. Responce.	50ms			
Graphic Display	VFD			
Operation Key Feature	Soft key, Numeric key, Rotary Knob			
Rack mount Handles	Yes			
FAN	Temperature Control			
Protection Circuits	OCP, OVP, OPP, OTP, FAN			
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)			
<b>Remote Control Input/Output signal characteristics</b>				
Remote Input signal	Not Support			
Remote output signal	Not Support			
<b>Environmental</b>				
Operating Temperature	0°C~40°C			
Storage Temperature	-20°C~70°C			
Altitude	2000m			
Relative Humidity	10%-90%, non-condensing			
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current			
<b>Mechanical</b>				
Dimensions(W*H*D)	600.0*576.0*700.0 mm	600.0*843.0*700.0 mm	600.0*1196.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*890.0*820.0 mm	720.0*1160.0*820.0 mm	720.0*1535.0*820.0 mm	
Unit Weight	54kg+15kg*3 (REF)	100.0kg+15kg*6 (REF)	120.0kg+15kg*10 (REF)	
Shipping Weight	94kg+15kg*3 (REF)	160.0kg+15kg*6 (REF)	200.0kg+15kg*10 (REF)	
<b>Regulatory Compliance</b>				
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.			

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

# SPS Series DC Power Supply System

## SPS40VDC

MODEL	SPS40VDC12000W-2-13		SPS40VDC24000W-2-19		SPS40VDC40000W-2-27	
<b>Input</b>						
Voltage	190~265VAC					
Frequency	47~63Hz					
Phase	3 Phase, 4Wire+Groud/Y Connect					
Max.Current	75A		150A		250A	
Input Power Max	15kW		28.5kW		47.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC					
Efficiency	>88% Max @Full Load and Units=4kW Model					
<b>Output</b>						
Output Voltage	0~40V					
Output Current	0~360A		0~720A		0~1200A	
Output Power	12kW Max		24kW Max		40kW Max	
Load Regulation	Voltage	120mV		240mV		400mV
	Current	0.36A		0.75A		1.2A
Line Regulation	Voltage	0.02%F.S.+30mV				
	Current	0.02%F.S.+15mA				
Voltage Setting	Range	0~40V				
	Resolution	0.1mV				
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc				
Current Setting	Range	0~360A		0~720A		0~1200A
	Resolution	10mA		10mA		0.1A
	Accuracy	0.1%+0.10%F.S				
Ripple	Voltage	80mVp-p/12mVrms				
	Current	225mA(Full Range)		450mA(Full Range)		750mA(Full Range)
		30mA(TYP Value)		60mA(TYP Value)		100mA(TYP Value)
<b>Measurement</b>						
Voltage Setting	Range	0~40V				
	Resolution	0.1mV				
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc				
Current Setting	Range	0~360A		0~720A		0~1200A
	Resolution	10mA		10mA		0.1A
	Accuracy	0.1%+0.10%F.S				
<b>Extra Function</b>						
Remote Sense	Range	5V(DC), Max. Total power less than rated power				
Comm. Responce.	50ms					
Graphic Display	VFD					
Operation Key Feature	Soft key, Numeric key, Rotary Knob					
Rack mount Handles	Yes					
FAN	Temperature Control					
Protection Circuits	OCP, OVP, OPP, OTP, FAN					
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)					
<b>Remote Control Input/Output signal characteristics</b>						
Remote Input signal	Not Support					
Remote output signal	Not Support					
<b>Environmental</b>						
Operating Temperature	0°C~40°C					
Storage Temperature	-20°C~70°C					
Altitude	2000m					
Relative Humidity	10%-90%, non-condensing					
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current					
<b>Mechanical</b>						
Dimensions(W*H*D)	600.0*576.0*700.0 mm		600.0*843.0*700.0 mm		600.0*1196.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*890.0*820.0 mm		720.0*1160.0*820.0 mm		720.0*1535.0*820.0 mm	
Unit Weight	54kg+15kg*3 (REF)		100.0kg+15kg*6 (REF)		120.0kg+15kg*10 (REF)	
Shipping Weight	94kg+15kg*3 (REF)		160.0kg+15kg*6 (REF)		200.0kg+15kg*10 (REF)	
<b>Regulatory Compliance</b>						
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.					

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

**SPS75VDC**

MODEL	SPS75VDC12000W-2-13		SPS75VDC24000W-2-19	SPS75VDC40000W-2-27
<b>Input</b>				
Voltage	190~265VAC			
Frequency	47~63Hz			
Phase	3 Phase, 4Wire+Groud/Y Connect			
Max.Current	75A	150A	250A	
Input Power Max	15kW	28.5kW	47.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC			
Efficiency	>88% Max @Full Load and Units=4kW Model			
<b>Output</b>				
Output Voltage	0~75V			
Output Current	0~180A	0~360A	0~600A	
Output Power	12kW Max	24kW Max	40kW Max	
Load Regulation	Voltage	120mV	240mV	400mV
	Current	0.18A	0.36A	0.6A
Line Regulation	Voltage	0.02%F.S.+30mV		
	Current	0.02%F.S.+15mA		
Voltage Setting	Range	0~75V		
	Resolution	0.1mV		
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc		
Current Setting	Range	0~180A	0~360A	0~600A
	Resolution	10mA		
	Accuracy	0.1%+0.10%F.S		
Ripple	Voltage	80mVp-p/16mVrms		
	Current	90mA(Full Range)	180mA(Full Range)	300mA(Full Range)
		15mA(TYP Value)	30mA(TYP Value)	50mA(TYP Value)
<b>Measurement</b>				
Voltage Setting	Range	0~75V		
	Resolution	0.1mV		
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc		
Current Setting	Range	0~180A	0~360A	0~600A
	Resolution	10mA		
	Accuracy	0.1%+0.10%F.S		
<b>Extra Function</b>				
Remote Sense	Range	5V(DC), Max. Total power less than rated power		
Comm. Responce.	50ms			
Graphic Display	VFD			
Operation Key Feature	Soft key, Numeric key, Rotary Knob			
Rack mount Handles	Yes			
FAN	Temperature Control			
Protection Circuits	OCP, OVP, OPP, OTP, FAN			
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)			
<b>Remote Control Input/Output signal characteristics</b>				
Remote Input signal	Not Support			
Remote output signal	Not Support			
<b>Environmental</b>				
Operating Temperature	0°C~40°C			
Storage Temperature	-20°C~70°C			
Altitude	2000m			
Relative Humidity	10%-90%, non-condensing			
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current			
<b>Mechanical</b>				
Dimensions(W*H*D)	600.0*576.0*700.0 mm	600.0*843.0*700.0 mm	600.0*1196.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*890.0*820.0 mm	720.0*1160.0*820.0 mm	720.0*1535.0*820.0 mm	
Unit Weight	54kg+15kg*3 (REF)	100.0kg+15kg*6 (REF)	120.0kg+15kg*10 (REF)	
Shipping Weight	94kg+15kg*3 (REF)	160.0kg+15kg*6 (REF)	200.0kg+15kg*10 (REF)	
<b>Regulatory Compliance</b>				
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.			

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

# SPS Series DC Power Supply System

## SPS80VDC

MODEL	SPS80VDC9000W-2-13		SPS80VDC18000W-2-19	SPS80VDC30000W-2-27
<b>Input</b>				
Voltage	190~265VAC			
Frequency	47~63Hz			
Phase	3 Phase, 4Wire+Groud/Y Connect			
Max.Current	55A	107A	178A	
Input Power Max	10.5kW	20.5kW	34kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC			
Efficiency	>88% Max @Full Load and Units=3kW Model			
<b>Output</b>				
Output Voltage	0~80V			
Output Current	0~180A	0~360A	0~600A	
Output Power	9kW Max	18kW Max	30kW Max	
Load Regulation	Voltage	120mV	240mV	400mV
	Current	0.18A	0.36A	0.6A
Line Regulation	Voltage	0.02%F.S.+30mV		
	Current	0.02%F.S.+15mA		
Voltage Setting	Range	0~80V		
	Resolution	0.1 mV		
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc		
Current Setting	Range	0~180A	0~360A	0~600A
	Resolution	10mA		
	Accuracy	0.1%+0.10%F.S		
Ripple	Voltage	120mVp-p/18mVrms	240mVp-p/36mVrms	400mVp-p/60mVrms
	Current	75mA(Full Range)	150mA(Full Range)	250mA(Full Range)
		15mA(TYP Value)	30mA(TYP Value)	50mA(TYP Value)
<b>Measurement</b>				
Voltage Setting	Range	0~80V		
	Resolution	0.1 mV		
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc		
Current Setting	Range	0~180A	0~360A	0~600A
	Resolution	10mA		
	Accuracy	0.1%+0.10%F.S		
<b>Extra Function</b>				
Remote Sense	Range	5V(DC), Max. Total power less than rated power		
Comm. Responce.	50ms			
Graphic Display	VFD			
Operation Key Feature	Soft key, Numeric key, Rotary Knob			
Rack mount Handles	Yes			
FAN	Temperature Control			
Protection Circuits	OCP, OVP, OPP, OTP, FAN			
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Option)			
<b>Remote Control Input/Output signal characteristics</b>				
Remote Input signal	Not Support			
Remote output signal	Not Support			
<b>Environmental</b>				
Operating Temperature	0°C~40°C			
Storage Temperature	-20°C~70°C			
Altitude	2000m			
Relative Humidity	10%-90%, non-condensing			
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current			
<b>Mechanical</b>				
Dimensions(W*H*D)	600.0*576.0*700.0 mm	600.0*843.0*700.0 mm	600.0*1196.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*890.0*820.0 mm	720.0*1160.0*820.0 mm	720.0*1535.0*820.0 mm	
Unit Weight	54kg+15kg*3 (REF)	100.0kg+15kg*6 (REF)	120.0kg+15kg*10 (REF)	
Shipping Weight	94kg+15kg*3 (REF)	160.0kg+15kg*6 (REF)	200.0kg+15kg*10 (REF)	
<b>Regulatory Compliance</b>				
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.			

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

**SPS96VDC**

MODEL		SPS96VDC12000W-2-13
<b>Input</b>		
Voltage	190~265VAC	
Frequency	47~63Hz	
Phase	3 Phase, 4Wire+Groud/Y Connect	
Max.Current	75A	
Input Power Max	15kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC	
Efficiency	>88% Max @Full Load and Units=4kW Model	
<b>Output</b>		
Output Voltage	0~96V	
Output Current	0~200A	
Output Power	12kW Max	
Load Regulation	Voltage	90mV
	Current	0.6A
Line Regulation	Voltage	0.02%F.S.+30mV
	Current	0.02%F.S.+15mA
Voltage Setting	Range	0~96V
	Resolution	1mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~200A
	Resolution	1mA
	Accuracy	0.1%+0.10%F.S
Ripple	Voltage	90mVp-p/15mVrms
	Current	800mA(Full Range)
		400mA(TYP Value)
<b>Measurement</b>		
Voltage Setting	Range	0~96V
	Resolution	1mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~200A
	Resolution	1mA
	Accuracy	0.1%+0.10%F.S
<b>Extra Function</b>		
Remote Sense	Range	4V(DC), Max. Total power less than rated power
Comm. Responce.	50ms	
Graphic Display	VFD	
Operation Key Feature	Soft key, Numeric key, Rotary Knob	
Rack mount Handles	Yes	
FAN	Temperature Control	
Protection Circuits	OCP, OVP, OPP, OTP, FAN	
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)	
<b>Remote Control Input/Output signal characteristics</b>		
Remote Input signal	Not Support	
Remote output signal	Not Support	
<b>Environmental</b>		
Operating Temperature	0°C~40°C	
Storage Temperature	-20°C~70°C	
Altitude	2000m	
Relative Humidity	10%-90%, non-condensing	
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current	
<b>Mechanical</b>		
Dimensions(W*H*D)	600.0*576.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*890.0*820.0 mm	
Unit Weight	54kg+15kg*3 (REF)	
Shipping Weight	94kg+15kg*3 (REF)	
<b>Regulatory Compliance</b>		
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.	

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

# SPS Series DC Power Supply System

## SPS120VDC

MODEL	SPS120VDC12000W-2-13		SPS120VDC24000W-2-19	SPS120VDC40000W-2-27
<b>Input</b>				
Voltage	190~265VAC			
Frequency	47~63Hz			
Phase	3 Phase, 4Wire+Groud/Y Connect			
Max.Current	75A	150A	250A	
Input Power Max	15kW	28.5kW	47.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC			
Efficiency	>88% Max @Full Load and Units=4kW Model			
<b>Output</b>				
Output Voltage	0~120V			
Output Current	0~120A	0~240A	0~400A	
Output Power	12kW Max	24kW Max	40kW Max	
Load Regulation	Voltage	120mV	240mV	400mV
	Current	0.12A	0.24A	0.4A
Line Regulation	Voltage	0.02%F.S.+30mV		
	Current	0.02%F.S.+15mA		
Voltage Setting	Range	0~120V		
	Resolution	1mV		
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc		
Current Setting	Range	0~120A	0~240A	0~400A
	Resolution	10mA		
	Accuracy	0.1%+0.10%F.S		
Ripple	Voltage	160mVp-p/30mVrms		
	Current	90mA(Full Range)	180mA(Full Range)	300mA(Full Range)
		15mA(TYP Value)	30mA(TYP Value)	50mA(TYP Value)
<b>Measurement</b>				
Voltage Setting	Range	0~120V		
	Resolution	0.1mV	1mV	1mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc		
Current Setting	Range	0~120A	0~240A	0~400A
	Resolution	10mA		
	Accuracy	0.1%+0.10%F.S		
<b>Extra Function</b>				
Remote Sense	Range	5V(DC), Max. Total power less than rated power		
Comm. Response.	50ms			
Graphic Display	VFD			
Operation Key Feature	Soft key, Numeric key, Rotary Knob			
Rack mount Handles	Yes			
FAN	Temperature Control			
Protection Circuits	OCP, OVP, OPP, OTP, FAN			
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)			
<b>Remote Control Input/Output signal characteristics</b>				
Remote Input signal	Not Support			
Remote output signal	Not Support			
<b>Environmental</b>				
Operating Temperature	0°C~40°C			
Storage Temperature	-20°C~70°C			
Altitude	2000m			
Relative Humidity	10%-90%, non-condensing			
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current			
<b>Mechanical</b>				
Dimensions(W*H*D)	600.0*576.0*700.0 mm	600.0*843.0*700.0 mm	600.0*1196.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*890.0*820.0 mm	720.0*1160.0*820.0 mm	720.0*1535.0*820.0 mm	
Unit Weight	54kg+15kg*3 (REF)	100.0kg+15kg*6 (REF)	120.0kg+15kg*10 (REF)	
Shipping Weight	94kg+15kg*3 (REF)	160.0kg+15kg*6 (REF)	200.0kg+15kg*10 (REF)	
<b>Regulatory Compliance</b>				
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.			

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

**SPS150VDC**

MODEL	SPS150VDC12000W-2-13		SPS150VDC24000W-2-19	SPS150VDC40000W-2-27
<b>Input</b>				
Voltage	190~265VAC			
Frequency	47~63Hz			
Phase	3 Phase, 4Wire+Groud/Y Connect			
Max. Current	75A	150A	250A	
Input Power Max	15kW	28.5kW	47.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC			
Efficiency	>88% Max @Full Load and Units=4kW Model			
<b>Output</b>				
Output Voltage	0~150V			
Output Current	0~90A	0~180A	0~300A	
Output Power	12kW Max	24kW Max	40kW Max	
Load Regulation	Voltage	120mV	240mV	400mV
	Current	0.09A	0.18A	0.3A
Line Regulation	Voltage	0.02%F.S.+30mV		
	Current	0.02%F.S.+15mA		
Voltage Setting	Range	0~150V		
	Resolution	1mV		
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc		
Current Setting	Range	0~90A	0~180A	0~300A
	Resolution	1mA	10mA	10mA
	Accuracy	0.1%+0.10%F.S		
Ripple	Voltage	160mVp-p/30mVrms		
	Current	90mA(Full Range)	180mA(Full Range)	300mA(Full Range)
		15mA(TYP Value)	30mA(TYP Value)	50mA(TYP Value)
<b>Measurement</b>				
Voltage Setting	Range	0~150V		
	Resolution	1mV		
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc		
Current Setting	Range	0~90A	0~180A	0~300A
	Resolution	1mA	10mA	10mA
	Accuracy	0.1%+0.10%F.S		
<b>Extra Function</b>				
Remote Sense	Range	5V(DC), Max. Total power less than rated power		
Comm. Respondence.	50ms			
Graphic Display	VFD			
Operation Key Feature	Soft key, Numeric key, Rotary Knob			
Rack mount Handles	Yes			
FAN	Temperature Control			
Protection Circuits	OCP, OVP, OPP, OTP, FAN			
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)			
<b>Remote Control Input/Output signal characteristics</b>				
Remote Input signal	Not Support			
Remote output signal	Not Support			
<b>Environmental</b>				
Operating Temperature	0°C~40°C			
Storage Temperature	-20°C~70°C			
Altitude	2000m			
Relative Humidity	10%-90%, non-condensing			
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current			
<b>Mechanical</b>				
Dimensions(W*H*D)	600.0*576.0*700.0 mm	600.0*843.0*700.0 mm	600.0*1196.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*890.0*820.0 mm	720.0*1160.0*820.0 mm	720.0*1535.0*820.0 mm	
Unit Weight	54kg+15kg*3 (REF)	100.0kg+15kg*6 (REF)	120.0kg+15kg*10 (REF)	
Shipping Weight	94kg+15kg*3 (REF)	160.0kg+15kg*6 (REF)	200.0kg+15kg*10 (REF)	
<b>Regulatory Compliance</b>				
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.			

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

# SPS Series DC Power Supply System

## SPS192VDC

MODEL		SPS192VDC24000W-2-19
<b>Input</b>		
Voltage	190~265VAC	
Frequency	47~63Hz	
Phase	3 Phase, 4Wire+Groud/Y Connect	
Max.Current	150A	
Input Power Max	28.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC	
Efficiency	>88% Max @Full Load and Units=4kW Model	
<b>Output</b>		
Output Voltage	0~192V	
Output Current	0~200A	
Output Power	24kW Max	
Load Regulation	Voltage	180mV
	Current	1.2A
Line Regulation	Voltage	0.02%F.S.+30mV
	Current	0.02%F.S.+15mA
Voltage Setting	Range	0~192V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~200A
	Resolution	1mA
	Accuracy	0.1%+0.10%F.S
Ripple	Voltage	180mVp-p/30mVrms
	Current	800mA(Full Range)
		400mA(TYP Value)
<b>Measurement</b>		
Voltage Setting	Range	0~192V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~200A
	Resolution	1mA
	Accuracy	0.1%+0.10%F.S
<b>Extra Function</b>		
Remote Sense	Range	4V(DC), Max. Total power less than rated power
Comm. Respondence.	50ms	
Graphic Display	VFD	
Operation Key Feature	Soft key, Numeric key, Rotary Knob	
Rack mount Handles	Yes	
FAN	Temperature Control	
Protection Circuits	OCP, OVP, OPP, OTP, FAN	
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)	
<b>Remote Control Input/Output signal characteristics</b>		
Remote Input signal	Not Support	
Remote output signal	Not Support	
<b>Environmental</b>		
Operating Temperature	0°C~40°C	
Storage Temperature	-20°C~70°C	
Altitude	2000m	
Relative Humidity	10%-90%, non-condensing	
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current	
<b>Mechanical</b>		
Dimensions(W*H*D)	600.0*843.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*1160.0*820.0 mm	
Unit Weight	100.0kg+15kg*6 (REF)	
Shipping Weight	160.0kg+15kg*6 (REF)	
<b>Regulatory Compliance</b>		
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.	

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

**SPS200VDC**

MODEL	SPS200VDC12000W-2-13		SPS200VDC24000W-2-19	SPS200VDC40000W-2-27
<b>Input</b>				
Voltage	190~265VAC			
Frequency	47~63Hz			
Phase	3 Phase, 4Wire+Groud/Y Connect			
Max.Current	75A	150A	250A	
Input Power Max	15kW	28.5kW	47.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC			
Efficiency	>88% Max @Full Load and Units=4kW Model			
<b>Output</b>				
Output Voltage	0~200V			
Output Current	0~72A	0~144A	0~240A	
Output Power	12kW Max	24kW Max	40kW Max	
Load Regulation	Voltage	180mV	360mV	600mV
	Current	72mA	144mA	240mA
Line Regulation	Voltage	0.02%F.S.+30mV		
	Current	0.02%F.S.+15mA		
Voltage Setting	Range	0~200V		
	Resolution	1mV		
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc		
Current Setting	Range	0~72A	0~144A	0~240A
	Resolution	1mA	10mA	10mA
	Accuracy	0.1%+0.10%F.S		
Ripple	Voltage	300mVp-p/60mVrms		
	Current	75mA(Full Range)	150mA(Full Range)	250mA(Full Range)
		30mA(TYP Value)	60mA(TYP Value)	100mA(TYP Value)
<b>Measurement</b>				
Voltage Setting	Range	0~200V		
	Resolution	1mV		
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc		
Current Setting	Range	0~72A	0~144A	0~240A
	Resolution	1mA	10mA	10mA
	Accuracy	0.1%+0.10%F.S		
<b>Extra Function</b>				
Remote Sense	Range	5V(DC), Max. Total power less than rated power		
Comm. Responce.	50ms			
Graphic Display	VFD			
Operation Key Feature	Soft key, Numeric key, Rotary Knob			
Rack mount Handles	Yes			
FAN	Temperature Control			
Protection Circuits	OCP, OVP, OPP, OTP, FAN			
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Option)			
<b>Remote Control Input/Output signal characteristics</b>				
Remote Input signal	Not Support			
Remote output signal	Not Support			
<b>Environmental</b>				
Operating Temperature	0°C~40°C			
Storage Temperature	-20°C~70°C			
Altitude	2000m			
Relative Humidity	10%-90%, non-condensing			
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current			
<b>Mechanical</b>				
Dimensions(W*H*D)	600.0*576.0*700.0 mm	600.0*843.0*700.0 mm	600.0*1196.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*890.0*820.0 mm	720.0*1160.0*820.0 mm	720.0*1535.0*820.0 mm	
Unit Weight	54kg+15kg*3 (REF)	100.0kg+15kg*6 (REF)	120.0kg+15kg*10 (REF)	
Shipping Weight	94kg+15kg*3 (REF)	160.0kg+15kg*6 (REF)	200.0kg+15kg*10 (REF)	
<b>Regulatory Compliance</b>				
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.			

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

# SPS Series DC Power Supply System

## SPS225VDC

MODEL		SPS225VDC12000W-2-13
<b>Input</b>		
Voltage	190~265VAC	
Frequency	47~63Hz	
Phase	3 Phase, 4Wire+Groud/Y Connect	
Max.Current	75A	
Input Power Max	15kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC	
Efficiency	>88% Max @Full Load and Units=4kW Model	
<b>Output</b>		
Output Voltage	0~225V	
Output Current	0~60A	
Output Power	12kW Max	
Load Regulation	Voltage	120mV
	Current	0.18A
Line Regulation	Voltage	0.02%F.S.+30mV
	Current	0.02%F.S.+15mA
Voltage Setting	Range	0~225V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~60A
	Resolution	0.1mA
	Accuracy	0.1%+0.10%F.S
Ripple	Voltage	60mVp-p/12mVrms
	Current	120mA(Full Range)
		20mA(TYP Value)
<b>Measurement</b>		
Voltage Setting	Range	0~225V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~60A
	Resolution	0.1mA
	Accuracy	0.1%+0.10%F.S
<b>Extra Function</b>		
Remote Sense	Range	5V(DC), Max. Total power less than rated power
Comm. Respondence.	50ms	
Graphic Display	VFD	
Operation Key Feature	Soft key, Numeric key, Rotary Knob	
Rack mount Handles	Yes	
FAN	Temperature Control	
Protection Circuits	OCP, OVP, OPP, OTP, FAN	
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)	
<b>Remote Control Input/Output signal characteristics</b>		
Remote Input signal	Not Support	
Remote output signal	Not Support	
<b>Environmental</b>		
Operating Temperature	0°C~40°C	
Storage Temperature	-20°C~70°C	
Altitude	2000m	
Relative Humidity	10%-90%, non-condensing	
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current	
<b>Mechanical</b>		
Dimensions(W*H*D)	600.0*576.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*890.0*820.0 mm	
Unit Weight	54kg+15kg*3 (REF)	
Shipping Weight	94kg+15kg*3 (REF)	
<b>Regulatory Compliance</b>		
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.	

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

**SPS240VDC**

MODEL		SPS240VDC9000W-2-13	SPS240VDC24000W-2-19
<b>Input</b>			
Voltage	190~265VAC		
Frequency	47~63Hz		
Phase	3 Phase,4Wire+Groud/Y Connect		
Max.Current	55A	150A	
Input Power Max	10.5kW	28.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC		
Efficiency	>88% Max @Full Load and Units=3kW Model		>88% Max @Full Load and Units=4kW Model
<b>Output</b>			
Output Voltage	0~240V		
Output Current	0~60A	0~120A	
Output Power	9kW Max	24kW Max	
Load Regulation	Voltage	120mV	240mV
	Current	0.18A	0.75A
Line Regulation	Voltage	0.02%F.S.+30mV	
	Current	0.02%F.S.+15mA	
Voltage Setting	Range	0~240V	
	Resolution	10mV	
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc	
		0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc	
Current Setting	Range	0~60A	0~120A
	Resolution	2mA	1mA
	Accuracy	0.1%+0.10%F.S	
Ripple	Voltage	60mVp-p/9mVrms	120mVp-p/18mVrms
	Current	150mA(Full Range)	300mA(Full Range)
		30mA(TYP Value)	0mA(TYP Value)
<b>Measurement</b>			
Voltage Setting	Range	0~240V	
	Resolution	10mV	
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc	
0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc			
Current Setting	Range	0~60A	0~120A
	Resolution	2mA	1mA
	Accuracy	0.1%+0.10%F.S	
<b>Extra Function</b>			
Remote Sense	Range	5V(DC), Max. Total power less than rated power	
Comm. Responce.	50ms		
Graphic Display	VFD		
Operation Key Feature	Soft key, Numeric key, Rotary Knob		
Rack mount Handles	Yes		
FAN	Temperature Control		
Protection Circuits	OCP, OVP, OPP, OTP, FAN		
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)		
<b>Remote Control Input/Output signal characteristics</b>			
Remote Input signal	Not Support		
Remote output signal	Not Support		
<b>Environmental</b>			
Operating Temperature	0°C~40°C		
Storage Temperature	-20°C~70°C		
Altitude	2000m		
Relative Humidity	10%-90%, non-condensing		
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current		
<b>Mechanical</b>			
Dimensions(W*H*D)	600.0*576.0*700.0 mm	600.0*843.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*890.0*820.0 mm	720.0*1160.0*820.0 mm	
Unit Weight	54kg+15kg*3 (REF)	100.0kg+15kg*6 (REF)	
Shipping Weight	94kg+15kg*3 (REF)	160.0kg+15kg*6 (REF)	
<b>Regulatory Compliance</b>			
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.		

\*F.S. represents the maximum value of the output range.  
 \*N stands for the number of installed power supply units, and N is greater than 1.  
 All specifications are subject to change without notice.

# SPS Series DC Power Supply System

## SPS320VDC

MODEL		SPS320VDC40000W-2-27
<b>Input</b>		
Voltage	190~265VAC	
Frequency	47~63Hz	
Phase	3 Phase, 4Wire+Groud/Y Connect	
Max.Current	250A	
Input Power Max	47.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC	
Efficiency	>88% Max @Full Load and Units=4kW Model	
<b>Output</b>		
Output Voltage	0~320V	
Output Current	0~200A	
Output Power	40kW Max	
Load Regulation	Voltage	300mV
	Current	2A
Line Regulation	Voltage	0.02%F.S.+30mV
	Current	0.02%F.S.+15mA
Voltage Setting	Range	0~320V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~200A
	Resolution	1mA
	Accuracy	0.1%+0.10%F.S
Ripple	Voltage	300mVp-p/50mVrms
	Current	800mA(Full Range)
		400mA(TYP Value)
<b>Measurement</b>		
Voltage Setting	Range	0~320V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~200A
	Resolution	1mA
	Accuracy	0.1%+0.10%F.S
<b>Extra Function</b>		
Remote Sense	Range	4V(DC), Max. Total power less than rated power
Comm. Responce.	50ms	
Graphic Display	VFD	
Operation Key Feature	Soft key, Numeric key, Rotary Knob	
Rack mount Handles	Yes	
FAN	Temperature Control	
Protection Circuits	OCP, OVP, OPP, OTP, FAN	
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Option)	
<b>Remote Control Input/Output signal characteristics</b>		
Remote Input signal	Not Support	
Remote output signal	Not Support	
<b>Environmental</b>		
Operating Temperature	0°C~40°C	
Storage Temperature	-20°C~70°C	
Altitude	2000m	
Relative Humidity	10%-90%, non-condensing	
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current	
<b>Mechanical</b>		
Dimensions(W*H*D)	600.0*1196.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*1535.0*820.0 mm	
Unit Weight	120.0kg+15kg*10 (REF)	
Shipping Weight	200.0kg+15kg*10 (REF)	
<b>Regulatory Compliance</b>		
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.	

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

**SPS360VDC**

MODEL		SPS360VDC12000W-2-13
<b>Input</b>		
Voltage	190~265VAC	
Frequency	47~63Hz	
Phase	3 Phase, 4Wire+Groud/Y Connect	
Max. Current	75A	
Input Power Max	15kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC	
Efficiency	>88% Max @Full Load and Units=4kW Model	
<b>Output</b>		
Output Voltage	0~360V	
Output Current	0~40A	
Output Power	12kW Max	
Load Regulation	Voltage	120mV
	Current	0.12A
Line Regulation	Voltage	0.02%F.S.+30mV
	Current	0.02%F.S.+15mA
Voltage Setting	Range	0~360V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~40A
	Resolution	0.1mA
	Accuracy	0.1%+0.10%F.S
Ripple	Voltage	120mVp-p/22.5mVrms
	Current	120mA(Full Range)
		20mA(TYP Value)
<b>Measurement</b>		
Voltage Setting	Range	0~360V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~40A
	Resolution	0.1mA
	Accuracy	0.1%+0.10%F.S
<b>Extra Function</b>		
Remote Sense	Range	5V(DC), Max. Total power less than rated power
Comm. Responce.	50ms	
Graphic Display	VFD	
Operation Key Feature	Soft key, Numeric key, Rotary Knob	
Rack mount Handles	Yes	
FAN	Temperature Control	
Protection Circuits	OCP, OVP, OPP, OTP, FAN	
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)	
<b>Remote Control Input/Output signal characteristics</b>		
Remote Input signal	Not Support	
Remote output signal	Not Support	
<b>Environmental</b>		
Operating Temperature	0°C~40°C	
Storage Temperature	-20°C~70°C	
Altitude	2000m	
Relative Humidity	10%-90%, non-condensing	
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current	
<b>Mechanical</b>		
Dimensions(W*H*D)	600.0*576.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*890.0*820.0 mm	
Unit Weight	4kg+15kg*3 (REF)	
Shipping Weight	94kg+15kg*3 (REF)	
<b>Regulatory Compliance</b>		
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.	

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

# SPS Series DC Power Supply System

## SPS400VDC

MODEL		SPS400VDC40000W-2-27
<b>Input</b>		
Voltage	190~265VAC	
Frequency	47~63Hz	
Phase	3 Phase, 4Wire+Groud/Y Connect	
Max.Current	250A	
Input Power Max	47.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC	
Efficiency	>88% Max @Full Load and Units=4kW Model	
<b>Output</b>		
Output Voltage	0~400V	
Output Current	0~120A	
Output Power	40kW Max	
Load Regulation	Voltage	400mV
	Current	1.2A
Line Regulation	Voltage	0.02%F.S.+30mV
	Current	0.02%F.S.+15mA
Voltage Setting	Range	0~400V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~120A
	Resolution	1mA
	Accuracy	0.1%+0.10%F.S
Ripple	Voltage	200mVp-p/30mVrms
	Current	300mA(Full Range)
		40mA(TYP Value)
<b>Measurement</b>		
Voltage Setting	Range	0~400V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~120A
	Resolution	1mA
	Accuracy	0.1%+0.10%F.S
<b>Extra Function</b>		
Remote Sense	Range	5V(DC), Max. Total power less than rated power
Comm. Responce.	50ms	
Graphic Display	VFD	
Operation Key Feature	Soft key, Numeric key, Rotary Knob	
Rack mount Handles	Yes	
FAN	Temperature Control	
Protection Circuits	OCP, OVP, OPP, OTP, FAN	
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)	
<b>Remote Control Input/Output signal characteristics</b>		
Remote Input signal	Not Support	
Remote output signal	Not Support	
<b>Environmental</b>		
Operating Temperature	0°C~40°C	
Storage Temperature	-20°C~70°C	
Altitude	2000m	
Relative Humidity	10%-90%, non-condensing	
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current	
<b>Mechanical</b>		
Dimensions(W*H*D)	600.0*1196.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*1535.0*820.0 mm	
Unit Weight	120.0kg+15kg*10 (REF)	
Shipping Weight	200.0kg+15kg*10 (REF)	
<b>Regulatory Compliance</b>		
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.	

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

**SPS450VDC**

MODEL		SPS450VDC12000W-2-13	SPS450VDC24000W-2-19
<b>Input</b>			
Voltage	190~265VAC		
Frequency	47~63Hz		
Phase	3 Phase, 4Wire+Groud/Y Connect		
Max.Current	75A	150A	
Input Power Max	15kW	28.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC		
Efficiency	>88% Max @Full Load and Units=4kW Model		
<b>Output</b>			
Output Voltage	0~450V		
Output Current	0~30A	0~60A	
Output Power	12kW Max	24kW Max	
Load Regulation	Voltage	120mV	240mV
	Current	0.09A	0.36A
Line Regulation	Voltage	0.02%F.S.+30mV	
	Current	0.02%F.S.+15mA	
Voltage Setting	Range	0~450V	
	Resolution	10mV	
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc	
Current Setting	Range	0~30A	0~60A
	Resolution	0.1mA	
	Accuracy	0.1%+0.10%F.S	
Ripple	Voltage	120mVp-p/22.5mVrms	120mVp-p/24mVrms
	Current	120mA(Full Range)	
		20mA(TYP Value)	
<b>Measurement</b>			
Voltage Setting	Range	0~450V	
	Resolution	10mV	
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc	
Current Setting	Range	0~30A	0~60A
	Resolution	0.1mA	
	Accuracy	0.1%+0.10%F.S	
<b>Extra Function</b>			
Remote Sense	Range	5V(DC), Max. Total power less than rated power	
Comm. Responce.	50ms		
Graphic Display	VFD		
Operation Key Feature	Soft key, Numeric key, Rotary Knob		
Rack mount Handles	Yes		
FAN	Temperature Control		
Protection Circuits	OCP, OVP, OPP, OTP, FAN		
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)		
<b>Remote Control Input/Output signal characteristics</b>			
Remote Input signal	Not Support		
Remote output signal	Not Support		
<b>Environmental</b>			
Operating Temperature	0°C~40°C		
Storage Temperature	-20°C~70°C		
Altitude	2000m		
Relative Humidity	10%-90%, non-condensing		
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current		
<b>Mechanical</b>			
Dimensions(W*H*D)	600.0*576.0*700.0 mm	600.0*843.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*890.0*820.0 mm	720.0*1160.0*820.0 mm	
Unit Weight	54kg+15kg*3 (REF)	100.0kg+15kg*6 (REF)	
Shipping Weight	94kg+15kg*3 (REF)	160.0kg+15kg*6 (REF)	
<b>Regulatory Compliance</b>			
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.		

\*F.S. represents the maximum value of the output range.  
 \*N stands for the number of installed power supply units, and N is greater than 1.  
 All specifications are subject to change without notice.

# SPS Series DC Power Supply System

## SPS480VDC

MODEL		SPS480VDC18000W-2-19
<b>Input</b>		
Voltage	190~265VAC	
Frequency	47~63Hz	
Phase	3 Phase, 4Wire+Groud/Y Connect	
Max.Current	107A	
Input Power Max	20.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC	
Efficiency	>88% Max @Full Load and Units=3kW Model	
<b>Output</b>		
Output Voltage	0~480V	
Output Current	0~60A	
Output Power	18kW Max	
Load Regulation	Voltage	240mV
	Current	0.36A
Line Regulation	Voltage	0.02%F.S.+30mV
	Current	0.02%F.S.+15mA
Voltage Setting	Range	0~480V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~60A
	Resolution	2mA
	Accuracy	0.1%+0.10%F.S
Ripple	Voltage	120mVp-p/18mVrms
	Current	300mA(Full Range)
		60mA(TYP Value)
<b>Measurement</b>		
Voltage Setting	Range	0~480V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~60A
	Resolution	2mA
	Accuracy	0.1%+0.10%F.S
<b>Extra Function</b>		
Remote Sense	Range	5V(DC), Max. Total power less than rated power
Comm. Respondence.	50ms	
Graphic Display	VFD	
Operation Key Feature	Soft key, Numeric key, Rotary Knob	
Rack mount Handles	Yes	
FAN	Temperature Control	
Protection Circuits	OCP, OVP, OPP, OTP, FAN	
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)	
<b>Remote Control Input/Output signal characteristics</b>		
Remote Input signal	Not Support	
Remote output signal	Not Support	
<b>Environmental</b>		
Operating Temperature	0°C~40°C	
Storage Temperature	-20°C~70°C	
Altitude	2000m	
Relative Humidity	10%-90%, non-condensing	
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current	
<b>Mechanical</b>		
Dimensions(W*H*D)	600.0*843.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*1160.0*820.0 mm	
Unit Weight	100.0kg+15kg*6 (REF)	
Shipping Weight	160.0kg+15kg*6 (REF)	
<b>Regulatory Compliance</b>		
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.	

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

**SPS600VDC**

MODEL	SPS600VDC12000W-2-13		SPS600VDC24000W-2-19	SPS600VDC40000W-2-27
<b>Input</b>				
Voltage	190~265VAC			
Frequency	47~63Hz			
Phase	3 Phase, 4Wire+Groud/Y Connect			
Max.Current	75A	150A	250A	
Input Power Max	15kW	28.5kW	47.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC			
Efficiency	>88% Max @Full Load and Units=4kW Model			
<b>Output</b>				
Output Voltage	0~600V			
Output Current	0~30A	0~60A	0~100A	
Output Power	12kW Max	24kW Max	40kW Max	
Load Regulation	Voltage	240mV	480mV	800mV
	Current	30mA	60mA	100mA
Line Regulation	Voltage	0.02%F.S.+30mV		
	Current	0.02%F.S.+15mA		
Voltage Setting	Range	0~600V		
	Resolution	1mV		
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc		
Current Setting	Range	0~30A	0~60A	0~100A
	Resolution	1mA		
	Accuracy	0.1%+0.10%F.S		
Ripple	Voltage	700mVp-p/80mVrms		
	Current	37.5mA(Full Range)	75mA(Full Range)	125mA(Full Range)
		15mA(TYP Value)	30mA(TYP Value)	50mA(TYP Value)
<b>Measurement</b>				
Voltage Setting	Range	0~600V		
	Resolution	1mV		
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc		
Current Setting	Range	0~30A	0~60A	0~100A
	Resolution	1mA		
	Accuracy	0.1%+0.10%F.S		
<b>Extra Function</b>				
Remote Sense	Range	5V(DC), Max. Total power less than rated power		
Comm. Responce.	50ms			
Graphic Display	VFD			
Operation Key Feature	Soft key, Numeric key, Rotary Knob			
Rack mount Handles	Yes			
FAN	Temperature Control			
Protection Circuits	OCP, OVP, OPP, OTP, FAN			
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Option)			
<b>Remote Control Input/Output signal characteristics</b>				
Remote Input signal	Not Support			
Remote output signal	Not Support			
<b>Environmental</b>				
Operating Temperature	0°C~40°C			
Storage Temperature	-20°C~70°C			
Altitude	2000m			
Relative Humidity	10%-90%, non-condensing			
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current			
<b>Mechanical</b>				
Dimensions(W*H*D)	600.0*576.0*700.0 mm	600.0*843.0*700.0 mm	600.0*1196.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*890.0*820.0 mm	720.0*1160.0*820.0 mm	720.0*1535.0*820.0 mm	
Unit Weight	54kg+15kg*3 (REF)	100.0kg+15kg*6 (REF)	120.0kg+15kg*10 (REF)	
Shipping Weight	94kg+15kg*3 (REF)	160.0kg+15kg*6 (REF)	200.0kg+15kg*10 (REF)	
<b>Regulatory Compliance</b>				
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.			

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

# SPS Series DC Power Supply System

## SPS720VDC

MODEL		SPS720VDC24000W-2-19
<b>Input</b>		
Voltage	190~265VAC	
Frequency	47~63Hz	
Phase	3 Phase, 4Wire+Groud/Y Connect	
Max.Current	150A	
Input Power Max	28.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC	
Efficiency	>88% Max @Full Load and Units=4kW Model	
<b>Output</b>		
Output Voltage	0~720V	
Output Current	0~40A	
Output Power	24kW Max	
Load Regulation	Voltage	240mV
	Current	0.24A
Line Regulation	Voltage	0.02%F.S.+30mV
	Current	0.02%F.S.+15mA
Voltage Setting	Range	0~720V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~40A
	Resolution	0.1mA
	Accuracy	0.1%+0.10%F.S
Ripple	Voltage	240mVp-p/45mVrms
	Current	120mA(Full Range)
		20mA(TYP Value)
<b>Measurement</b>		
Voltage Setting	Range	0~720V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~40A
	Resolution	0.1mA
	Accuracy	0.1%+0.10%F.S
<b>Extra Function</b>		
Remote Sense	Range	5V(DC), Max. Total power less than rated power
Comm. Responce.	50ms	
Graphic Display	VFD	
Operation Key Feature	Soft key, Numeric key, Rotary Knob	
Rack mount Handles	Yes	
FAN	Temperature Control	
Protection Circuits	OCP, OVP, OPP, OTP, FAN	
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Option)	
<b>Remote Control Input/Output signal characteristics</b>		
Remote Input signal	Not Support	
Remote output signal	Not Support	
<b>Environmental</b>		
Operating Temperature	0°C~40°C	
Storage Temperature	-20°C~70°C	
Altitude	2000m	
Relative Humidity	10%-90%, non-condensing	
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current	
<b>Mechanical</b>		
Dimensions(W*H*D)	600.0*843.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*1160.0*820.0 mm	
Unit Weight	100.0kg+15kg*6 (REF)	
Shipping Weight	160.0kg+15kg*6 (REF)	
<b>Regulatory Compliance</b>		
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.	

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

**SPS750VDC**

MODEL		SPS750VDC40000W-2-27
<b>Input</b>		
Voltage	190~265VAC	
Frequency	47~63Hz	
Phase	3 Phase, 4Wire+Groud/Y Connect	
Max.Current	250A	
Input Power Max	47.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC	
Efficiency	>88% Max @Full Load and Units=4kW Model	
<b>Output</b>		
Output Voltage	0~750V	
Output Current	0~60A	
Output Power	40kW Max	
Load Regulation	Voltage	400mV
	Current	0.6A
Line Regulation	Voltage	0.02%F.S.+30mV
	Current	0.02%F.S.+15mA
Voltage Setting	Range	0~750V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~60A
	Resolution	0.1mA
	Accuracy	0.1%+0.10%F.S
Ripple	Voltage	200mVp-p/40mVrms
	Current	120mA(Full Range)
		20mA(TYP Value)
<b>Measurement</b>		
Voltage Setting	Range	0~750V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~60A
	Resolution	0.1mA
	Accuracy	0.1%+0.10%F.S
<b>Extra Function</b>		
Remote Sense	Range	5V(DC), Max. Total power less than rated power
Comm. Responce.	50ms	
Graphic Display	VFD	
Operation Key Feature	Soft key, Numeric key, Rotary Knob	
Rack mount Handles	Yes	
FAN	Temperature Control	
Protection Circuits	OCP, OVP, OPP, OTP, FAN	
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)	
<b>Remote Control Input/Output signal characteristics</b>		
Remote Input signal	Not Support	
Remote output signal	Not Support	
<b>Environmental</b>		
Operating Temperature	0°C~40°C	
Storage Temperature	-20°C~70°C	
Altitude	2000m	
Relative Humidity	10%-90%, non-condensing	
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current	
<b>Mechanical</b>		
Dimensions(W*H*D)	600.0*1196.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*1535.0*820.0 mm	
Unit Weight	120.0kg+15kg*10 (REF)	
Shipping Weight	200.0kg+15kg*10 (REF)	
<b>Regulatory Compliance</b>		
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.	

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

# SPS Series DC Power Supply System

## SPS800VDC

MODEL	SPS800VDC12000W-2-13		SPS800VDC24000W-2-19		SPS800VDC30000W-2-27		SPS800VDC40000W-2-27		
<b>Input</b>									
Voltage	190~265VAC								
Frequency	47~63Hz								
Phase	3 Phase, 4Wire+Groud/Y Connect								
Max.Current	75A		150A		178A		250A		
Input Power Max	15kW		28.5kW		34kW		47.5kW		
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC								
Efficiency	>88% Max @Full Load and Units=4kW Model		>88% Max @Full Load and Units=4kW Model		>88% Max @Full Load and Units=3kW Model		>88% Max @Full Load and Units=4kW Model		
<b>Output</b>									
Output Voltage	0~800V								
Output Current	0~22.5A		0~45A		0~60A		0~75A		
Output Power	12kW Max		24kW Max		30kW Max		40kW Max		
Load Regulation	Voltage	1.5V		3V		400mV		5V	
	Current	22.5mA		45mA		0.6A		75mA	
Line Regulation	Voltage	0.02%F.S.+30mV							
	Current	0.02%F.S.+15mA							
Voltage Setting	Range	0~800V							
	Resolution	1mV		1mV		10mV		1mV	
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc							
Current Setting	Range	0~22.5A		0~45A		0~60A		0~75A	
	Resolution	1mA		1mA		2mA		1mA	
	Accuracy	0.1%+0.10%F.S							
Ripple	Voltage	1600mVp-p/400mVrms		1600mVp-p/400mVrms		200mVp-p/30mVrms		1600mVp-p/400mVrms	
	Current	37.5mA(Full Range)		75mA(Full Range)		500mA(Full Range)		125mA(Full Range)	
		15mA(TYP Value)		30mA(TYP Value)		100mA(TYP Value)		50mA(TYP Value)	
<b>Measurement</b>									
Voltage Setting	Range	0~800V							
	Resolution	1mV		1mV		10mV		1mV	
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc							
Current Setting	Range	0~22.5A		0~45A		0~60A		0~75A	
	Resolution	1mA		1mA		2mA		1mA	
	Accuracy	0.1%+0.10%F.S							
<b>Extra Function</b>									
Remote Sense	Range	5V(DC), Max. Total power less than rated power							
Comm. Responce.	50ms								
Graphic Display	VFD								
Operation Key Feature	Soft key, Numeric key, Rotary Knob								
Rack mount Handles	Yes								
FAN	Temperature Control								
Protection Circuits	OCP, OVP, OPP, OTP, FAN								
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Option)								
<b>Remote Control Input/Output signal characteristics</b>									
Remote Input signal	Not Support								
Remote output signal	Not Support								
<b>Environmental</b>									
Operating Temperature	0°C~40°C								
Storage Temperature	-20°C~70°C								
Altitude	2000m								
Relative Humidity	10%-90%, non-condensing								
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current								
<b>Mechanical</b>									
Dimensions(W*H*D)	600.0*576.0*700.0 mm		600.0*843.0*700.0 mm		600.0*1196.0*700.0 mm		600.0*1196.0*700.0 mm		
Package Dimensions(W*H*D)	720.0*890.0*820.0 mm		720.0*1160.0*820.0 mm		720.0*1535.0*820.0 mm		720.0*1535.0*820.0 mm		
Unit Weight	54kg+15kg*3 (REF)		100.0kg+15kg*6 (REF)		120.0kg+15kg*10 (REF)		120.0kg+15kg*10 (REF)		
Shipping Weight	94kg+15kg*3 (REF)		160.0kg+15kg*6 (REF)		200.0kg+15kg*10 (REF)		200.0kg+15kg*10 (REF)		
<b>Regulatory Compliance</b>									
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.								

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

**SPS900VDC**

MODEL		SPS900VDC24000W-2-13
<b>Input</b>		
Voltage	190~265VAC	
Frequency	47~63Hz	
Phase	3 Phase, 4Wire+Groud/Y Connect	
Max.Current	150A	
Input Power Max	28.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC	
Efficiency	>88% Max @Full Load and Units=4kW Model	
<b>Output</b>		
Output Voltage	0~900V	
Output Current	0~30A	
Output Power	24kW Max	
Load Regulation	Voltage	240mV
	Current	0.18A
Line Regulation	Voltage	0.02%F.S.+30mV
	Current	0.02%F.S.+15mA
Voltage Setting	Range	0~900V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~30A
	Resolution	0.1mA
	Accuracy	0.1%+0.10%F.S
Ripple	Voltage	240mVp-p/45mVrms
	Current	120mA(Full Range)
		20mA(TYP Value)
<b>Measurement</b>		
Voltage Setting	Range	0~900V
	Resolution	10mV
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc
Current Setting	Range	0~30A
	Resolution	0.1mA
	Accuracy	0.1%+0.10%F.S
<b>Extra Function</b>		
Remote Sense	Range	5V(DC), Max. Total power less than rated power
Comm. Responce.	50ms	
Graphic Display	VFD	
Operation Key Feature	Soft key, Numeric key, Rotary Knob	
Rack mount Handles	Yes	
FAN	Temperature Control	
Protection Circuits	OCP, OVP, OPP, OTP, FAN	
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)	
<b>Remote Control Input/Output signal characteristics</b>		
Remote Input signal	Not Support	
Remote output signal	Not Support	
<b>Environmental</b>		
Operating Temperature	0°C~40°C	
Storage Temperature	-20°C~70°C	
Altitude	2000m	
Relative Humidity	10%-90%, non-condensing	
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current	
<b>Mechanical</b>		
Dimensions(W*H*D)	600.0*843.0*700.0 mm	
Package Dimensions(W*H*D)	720.0*1160.0*820.0 mm	
Unit Weight	100.0kg+15kg*6 (REF)	
Shipping Weight	160.0kg+15kg*6 (REF)	
<b>Regulatory Compliance</b>		
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.	

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.

# SPS Series DC Power Supply System

## SPS1200VDC

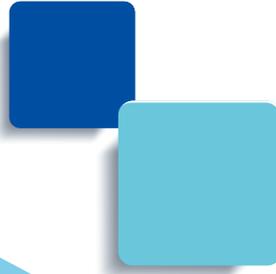
MODEL		SPS1200VDC24000W-2-19	SPS1200VDC40000W-2-27
<b>Input</b>			
Voltage	190~265VAC		
Frequency	47~63Hz		
Phase	3 Phase, 4Wire+Groud/Y Connect		
Max.Current	150A	250A	
Input Power Max	28.5kW	47.5kW	
Power Factor at 220VAC Input, Full Load	0.98 Min. Active PFC		
Efficiency	>88% Max @Full Load and Units=4kW Model		
<b>Output</b>			
Output Voltage	0~1200V		
Output Current	0~24A	0~40A	
Output Power	24kW Max		40kW Max
Load Regulation	Voltage	360mV	400mV
	Current	144mA	0.4A
Line Regulation	Voltage	0.02%F.S.+30mV	
	Current	0.02%F.S.+15mA	
Voltage Setting	Range	0~1200V	
	Resolution	0.1V	
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc	
Current Setting	Range	0~24A	0~40A
	Resolution	0.1mA	
	Accuracy	0.1%+0.10%F.S	
Ripple	Voltage	450mVp-p/90mVrms	400mVp-p/75mVrms
	Current	100mA(Full Range)	120mA(Full Range)
		40mA(TYP Value)	20mA(TYP Value)
<b>Measurement</b>			
Voltage Setting	Range	0~1200V	0~1200V
	Resolution	0.1V	
	Accuracy	0.1%+0.1%F.S. at 0< Ouput Voltage =<75Vdc 0.05%+0.05%F.S. at 75Vdc< Ouput Voltage =<1200Vdc	
Current Setting	Range	0~24A	0~40A
	Resolution	0.1mA	
	Accuracy	0.1%+0.10%F.S	
<b>Extra Function</b>			
Remote Sense	Range	5V(DC), Max. Total power less than rated power	
Comm. Responce.	50ms		
Graphic Display	VFD		
Operation Key Feature	Soft key, Numeric key, Rotary Knob		
Rack mount Handles	Yes		
FAN	Temperature Control		
Protection Circuits	OCP, OVP, OPP, OTP, FAN		
Interface	USB, RS485, RS232, LAN(Standard); GPIB(Optional)		
<b>Remote Control Input/Output signal characteristics</b>			
Remote Input signal	Not Support		
Remote output signal	Not Support		
<b>Environmental</b>			
Operating Temperature	0°C~40°C		
Storage Temperature	-20°C~70°C		
Altitude	2000m		
Relative Humidity	10%-90%, non-condensing		
Temperature Coefficient	100ppm/°C at Voltage, 300ppm/°C at Current		
<b>Mechanical</b>			
Dimensions(W*H*D)	600.0*843.0*700.0 mm		600.0*1196.0*700.0 mm
Package Dimensions(W*H*D)	720.0*1160.0*820.0 mm		720.0*1535.0*820.0 mm
Unit Weight	100.0kg+15kg*6 (REF)		120.0kg+15kg*10 (REF)
Shipping Weight	160.0kg+15kg*6 (REF)		200.0kg+15kg*10 (REF)
<b>Regulatory Compliance</b>			
CE Mark	Installation Overvoltage Category II; Class II equipment; indoor use only.		

\*F.S. represents the maximum value of the output range.

\*N stands for the number of installed power supply units, and N is greater than 1.

All specifications are subject to change without notice.





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