

# LP Series Linear Programmable DC Power Supply

Models: LP100VDC150W, LP75VDC300W, LP100VDC300W



The LP Series Programmable DC Power Supply is a linear DC power supply featured by its 3U height,ultrahigh resolution and accuracy,SCPI standard communication protocol,flexible match with any other instruments,and integration for testing system of special function.



LP Single Channel



LP Dual Channel



## Features

1. Low ripple and noise.
2. High resolution and accuracy (0.1 mV / 0.01 mA).
3. Built-in high-accuracy 5 1/2 digit DC voltmeter.
4. Support for high-accuracy & dynamic programming output.
5. Model LP75VDC300W is dual-channel 75 VDC 2 A output, whereas model LP100VDC150W is 100 VDC 1.5 A output.
6. High brightness vacuum fluorescent display (VFD),four rows of 8-channel simultaneous date output.
- 7.Duel-channel output can be connected in series or parallel to achieve single channel output(External wiring is required).
8. Operating temperature is up to 50°C.
9. Smart cooling system,the fan will automatically turned on/off according to temperatures.
9. Support externally triggered input and output (optional).
10. Start-up self diagnosis, software calibration and 19"standard equipment rack design.
11. Use SCPI standard communication protocol.
12. Built-in RS232 communication interface(port).

MODE	LP100VDC150W	LP100VDC300W	LP75VDC300W
Input Voltage Range	220VAC±10%/110VAC±10%	220VAC±10%/110VAC±10%	220VAC±10%/110VAC±10%
Input Frequency Range	47~63Hz	47~63Hz	47~63Hz
Rated Output Power	150W	300W	300W
Channel	Single Channel	Dual Channel	Dual Channel
Voltage Rated Output	0~100V	0~100V	0~75V
Current Rated Output	0~1.5A	0~1.5A	0~2A
Voltage Load Regulation	<0.02%+2mV	<0.02%+2mV	<0.01%+0.5mV
Current Load Regulation	<0.01%+2mA	<0.01%+2mA	<0.01%+0.5mA
Voltage Setting Regulation	1mV	1mV	1mV
Current Setting Regulation	0.05mA	0.05mA	0.05mA
Voltage Measurement Resolution	0.1mV	0.1mV	0.1mV
Current Measurement Resolution	0.01mA	0.01mA	0.01mA
Voltage Setting Accuracy	0.01%+5mV	0.01%+5mV	0.01%+5mV
Current Setting Accuracy	0.05%+0.5mA	0.05%+0.5mA	0.05%+0.5mA
Voltage Measurement Accuracy	0.02%+12mV	0.02%+12mV	0.02%+12mV
Current Measurement Accuracy	0.05%+2mA	0.05%+2mA	0.05%+2mA
Volmeter Accuracy	0~100V Accuracy: 0.02%+5mV	0~100V Accuracy: 0.02%+5mV	0~75V Accuracy: 0.02%+5mV
Voltage Ripple	70mVp-p/5mVrms	70mVp-p/5mVrms	70mVp-p/5mVrms
Current Ripple	1mA	1mA	1mA
Temperature Coefficient	300ppm/°C (TYP Value)	300ppm/°C (TYP Value)	300ppm/°C (TYP Value)
Storage Temperature	-20 ~ 70 °C	-20~70°C	-20~70°C
Operating Environment	0~50°C 0~95%RH	0~50°C 0~95%RH	0~50°C 0~95%RH
Cooling	Forced air cooling	Forced air cooling	Forced air cooling
Weight	12.2kg	19.2kg	19.2kg
Dimension (W X H X D)☐	482.0x133.0x477.0 mm		
Certification	CE		

Note:

All specifications are subject to change without notice. Please visit our website for the most up to date specifications.

Developed and Manufactured by:

**APM technologies**

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# SP Series: Switch-mode Programmable DC Power Supply



Item	Output Voltage	1U					2U			
		600W	1000W	1200W	1500W	1600W	1000W	2000W	3000W	4000W
1	20VDC	60A#	60A	60A	-	-	200A#	200A#	200A#	200A#
2	32VDC	50A	50A	50A	-	50A	-	-	120A	-
3	40VDC	40A	40A	40A	-	40A	120A	120A	120A	120A
4	60VDC	25A	25A	25A	25A	-	-	-	-	-
5	75VDC	20A	20A	20A	20A	-	50A	50A	50A	60A
6	80VDC	-	-	-	-	-	-	60A	60A	-
7	120VDC	-	-	-	-	-	40A	40A	40A	40A
8	150VDC	10A#	10A#	10A#	10A#	-	30A	30A	30A	30A
9	200VDC	8A#	8A#	8A#	8A#	-	24A	24A	24A	20A
10	400VDC	7.5A*	7.5A*	7.5A*	7.5A*	-	15A#	15A#	15A#	15A#
11	600VDC	5A*	5A*	5A*	5A*	-	10A#	10A#	10A#	10A#
12	800VDC	4A*	4A*	4A*	4A*	-	7.5A#	7.5A#	7.5A#	7.5A#

Remark: with - : Not available ; with \* : Pending ; with # : will be available in 2017

The SP Series Programmable DC Power Supply is a switch-mode single output programmable DC source with a height of 1U/2U. It is a high-precision programmable DC source using 32 bit D/A & 16 bit A/D sampling circuits, and with a voltage and current resolutions of up to 0.1 mV and 0.2mA, respectively. It supports multi-unit parallel operation mode (maximum 4 units) with a parallel-output. This feature makes the application and test of circuits more convenient and flexible. It also supports in-line (series) operation mode.



below 2000W

## Application area:

1. Automated testing sector: can be integrated in the automatic testing system.
2. Communication sector: can be used for the tests of mobile charger and portable power supply.
3. Medical field: can be used for medical device testing or integrated in medical equipment.
4. Automotive sector: support output of modified waveform to simulate the shocks of automobile being hit in a different state.

## Features

1. Wide input voltage range (90- 265VAC or 190- 265VAC ).
2. High power density, 1U or 2U.
3. Simple Master/Slave and parallel & series mode of operation.
4. With accurate voltage and current measurement capability.
5. High-speed programmable interface.
6. Coded knobs, multifunctional keyboard.
7. Switchable constant voltage (CV) and constant current (CC) operating modes.
8. Functions for gradual rise/drop of voltage.
9. Programmable and multiple ways of setting the voltage/current function.
10. Over-voltage, over-current, over-power, short circuit and over-temperature protections.
11. Built-in communication interface for USB/LAN/RS485/RS232, GPIB is optional.
12. Use SCPI standard communication protocol.
13. With standard external interface and remote output. Remote sense line voltage drop compensation.
14. DVM independent measurement functions.

MODE	SP20VDC600W (1U)	SP32VDC600W (1U)	SP40VDC600W (1U)	SP60VDC600W (1U)	SP75VDC600W (1U)	SP150VDC600W (1U)	SP200VDC600W (1U)	SP400VDC600W (1U)	SP600VDC600W (1U)	SP800VDC600W (1U)
Input Voltage Range	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC
Input Frequency Range	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ
Power Factor	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98
Output Power Range	0~600W	0~600W	0~600W	0~600W	0~600W	0~600W	0~600W	0~600W	0~600W	0~600W
Output Voltage Range	0~20V	0~32V	0~40V	0~60V	0~75V	0~150V	0~200V	0~400V	0~600V	0~800V
Output Current Range	0~60A	0~50A	0~40A	0~25A	0~20A	0~10A	0~8A	0~7.5A	0~5A	0~4A
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV	1mV	1mV	1mV	1mV	1mV
Current Display Resolution	0.2mA	0.2mA	0.2mA	0.2mA	0.2mA	0.2mA	0.1mA	0.1mA	0.1mA	0.1mA
Voltage Programming Resolution	1.5mV	1.5mV	1.5mV	1.5mV	1.5mV	3mV	3mV	8mV	12mV	16mV
Current Programming Resolution	2mA	2mA	2mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA
Voltage Setting Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Current Setting Accuracy	0.1%+60mA	0.1%+50mA	0.1%+40mA	0.1%+25mA	0.1%+20mA	0.1%+10mA	0.1%+8mA	0.1%+20mA	0.1%+16mA	0.1%+10mA
Voltage Measurement Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Current Measurement Accuracy	0.1%+60mA	0.1%+50mA	0.1%+40mA	0.1%+25mA	0.1%+20mA	0.1%+10mA	0.1%+8mA	0.1%+20mA	0.1%+16mA	0.1%+10mA
Voltage Ripple	40mVp-p/6mVrms					120mVp-p/40mVrms		180mVp-p/80mVrms		
Current Ripple	60mA(Full Range) 20mA(TYP Value)	50mA(Full Range) 20mA(TYP Value)	40mA(Full Range) 20mA(TYP Value)	25mA(Full Range) 10mA(TYP Value)	20mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)
Voltage Load Regulation	10mV	10mV	10mV	10mV	10mV	15mV	15mV	30mV	30mV	40mV
Current Load Regulation	60mA	50mA	40mA	25mA	20mA	10mA	8mA	20mA	16mA	10mA
Line Voltage Regulation	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.02%+8mV	0.02%+8mV	0.02%+20mV	0.02%+30mV	0.02%+40mV
Line Current Regulation	4mA	4mA	4mA	4mA	4mA	10mA	30mA	10mA	8mA	10mA
Voltage Temperature Coefficient	100ppm/°C									
Current Temperature Coefficient	150ppm/°C									
DVM Resolution	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV	1mV	1mV	8mV	12mV	16mV
DVM Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Operating Mode	Constant Voltage (CV)/ Constant Current (CC)									
Remote Compensation	4V MAX									
Response (Voltage Rise)	≤10ms	≤12ms	≤15ms	≤10ms	≤10ms	≤25ms	≤30ms	≤60ms	≤60ms	≤60ms
Response (Voltage Drop)	≤150ms (No Load) ≤20ms (Full Load)	≤150ms (No Load) ≤20ms (Full Load)	≤150ms (No Load) ≤20ms (Full Load)	≤100ms (No Load) ≤20ms (Full Load)	≤100ms (No Load) ≤20ms (Full Load)	≤400ms (No Load) ≤32ms (Full Load)	≤600ms (No Load) ≤50ms (Full Load)	≤800ms (No Load) ≤100ms (Full Load)	≤1200ms (No Load) ≤100ms (Full Load)	≤1200ms (No Load) ≤100ms (Full Load)
Load Transient Recovery Time	≤2ms	≤2ms	≤2ms	≤2ms	≤2ms	≤2ms	≤3ms	≤3ms	≤3ms	≤3ms
Command Respond Time	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms
Efficiency (Full Load)	82.5%	86%	87%	88%	88%	88%	88%	88%	88%	88%
Communication Mode	RS232/RS485/USB/LAN					1.RS232/RS485/USB/LAN; 2.RS232/RS485/USB/LAN/GPIB				
Protection Functions	OVP/OCV/OTP/OPP/SCP protection functions									
Net Weight	9.2kg	9.2kg	9.2kg	8.9kg	8.9kg	9.5kg	9.5kg	9.5kg	9.5kg	9.5kg
Weight of Accessory	0.8kg	0.8kg	0.8kg	0.8kg	0.8kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg
Dimension (W x H x D)	483.0x44.0x531.0 mm									
Operating Environment	Temperature: 0°C~40°C,Relative humidity:10%~90% (non-condensing)					Temperature: 0°C~40°C,Relative humidity:10%~90% (non-condensing)				
Cooling	Forced air-cooling									
Certification	CE/UL/CSA/FCC									

Note:  
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Developed and Manufactured by:  
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New Zealand	

MODE	SP20VDC1000W (1U)	SP32VDC1000W (1U)	SP40VDC1000W (1U)	SP60VDC1000W (1U)	SP75VDC1000W (1U)	SP150VDC1000W (1U)	SP200VDC1000W (1U)	SP400VDC1000W (1U)	SP600VDC1000W (1U)	SP800VDC1000W (1U)
Input Voltage Range	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC
Input Frequency Range	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ
Power Factor	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98
Output Power Range	0~1000W	0~1000W	0~1000W	0~1000W	0~1000W	0~1000W	0~1000W	0~1000W	0~1000W	0~1000W
Output Voltage Range	0~20V	0~32V	0~40V	0~60V	0~75V	0~150V	0~200V	0~400V	0~600V	0~800V
Output Current Range	0~60A	0~50A	0~40A	0~25A	0~20A	0~10A	0~8A	0~7.5A	0~5A	0~4A
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV	1mV	1mV	1mV	1mV	1mV
Current Display Resolution	0.2mA	0.2mA	0.2mA	0.2mA	0.2mA	0.2mA	0.2mA	0.1mA	0.1mA	0.1mA
Voltage Programming Resolution	1.5mV	1.5mV	1.5mV	1.5mV	1.5mV	3mV	3mV	8mV	12mV	16mV
Current Programming Resolution	2mA	2mA	2mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA
Voltage Setting Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Current Setting Accuracy	0.1%+60mA	0.1%+50mA	0.1%+40mA	0.1%+25mA	0.1%+20mA	0.1%+10mA	0.1%+8mA	0.1%+20mA	0.1%+16mA	0.1%+10mA
Voltage Measurement Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Current Measurement Accuracy	0.1%+60mA	0.1%+50mA	0.1%+40mA	0.1%+25mA	0.1%+20mA	0.1%+10mA	0.1%+8mA	0.1%+20mA	0.1%+16mA	0.1%+10mA
Voltage Ripple	40mVp-p/6mVrms						120mVp-p/40mVrms		180mVp-p/80mVrms	
Current Ripple	60mA(Full Range) 20mA(TYP Value)	50mA(Full Range) 20mA(TYP Value)	40mA(Full Range) 20mA(TYP Value)	25mA(Full Range) 10mA(TYP Value)	20mA(Full Range) 10mA(TYP Value)	40mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)
Voltage Load Regulation	10mV	10mV	10mV	10mV	10mV	15mV	15mV	30mV	30mV	40mV
Current Load Regulation	60mA	50mA	40mA	25mA	20mA	10mA	8mA	20mA	16mA	10mA
Line Voltage Regulation	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.02%+8mV	0.02%+8mV	0.02%+20mV	0.02%+30mV	0.02%+40mV
Line Current Regulation	4mA	4mA	4mA	4mA	4mA	10mA	30mA	10mA	8mA	10mA
Voltage Temperature Coefficient	100ppm/°C									
Current Temperature Coefficient	150ppm/°C									
DVM Resolution	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV	1mV	1mV	8mV	12mV	16mV
DVM Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Operating Mode	Constant Voltage (CV)/ Constant Current (CC)									
Remote Compensation	4V MAX									
Response (Voltage Rise)	≤10ms	≤12ms	≤15ms	≤10ms	≤10ms	≤25ms	≤30ms	≤60ms	≤60ms	≤60ms
Response (Voltage Drop)	≤150ms (No Load) ≤15ms (Full Load)	≤150ms (No Load) ≤15ms (Full Load)	≤150ms (No Load) ≤15ms (Full Load)	≤100ms (No Load) ≤15ms (Full Load)	≤100ms (No Load) ≤15ms (Full Load)	≤400ms (No Load) ≤25ms (Full Load)	≤600ms (No Load) ≤40ms (Full Load)	≤800ms (No Load) ≤80ms (Full Load)	≤1200ms (No Load) ≤80ms (Full Load)	≤1200ms (No Load) ≤80ms (Full Load)
Load Transient Recovery Time	≤2ms	≤2ms	≤2ms	≤2ms	≤2ms	≤2ms	≤3ms	≤3ms	≤3ms	≤3ms
Command Respond Time	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms
Efficiency (Full Load)	83%	89%	89%	89%	89%	89%	89%	90%	90%	90%
Communication Mode	RS232/RS485/USB/LAN					1,RS232/RS485/USB/LAN; 2,RS232/RS485/USB/LAN/GPIB				
Protection Functions	OVP/OCP/OTP/OPP/SCP protection functions									
Net Weight	9.2kg	9.2kg	9.2kg	8.9kg	8.9kg	9.5kg	9.5kg	9.5kg	9.5kg	9.5kg
Weight of Accessory	0.8kg	0.8kg	0.8kg	0.8kg	0.8kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg
Dimension (W x H x D)	483.0x44.0x531.0 mm									
Operating Environment	Temperature: 0°C~40°C,Relative humidity:10%~90% (non-condensing)					Temperature: 0°C~40°C,Relative humidity:10%~90% (non-condensing)				
Cooling	Forced air-cooling									
Certification	CE/UL/CSA/FCC									

Note:  
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Worldwide Distribution and Service Network	
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MODE	SP20VDC1200W (1U)	SP32VDC1200W (1U)	SP40VDC1200W (1U)	SP60VDC1200W (1U)	SP75VDC1200W (1U)	SP150VDC1200W (1U)	SP200VDC1200W (1U)	SP400VDC1200W (1U)	SP600VDC1200W (1U)	SP800VDC1200W (1U)
<b>Input Voltage Range</b>	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC
<b>Input Frequency Range</b>	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ
<b>Power Factor</b>	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98
<b>Output Power Range</b>	0~1200W	0~1200W	0~1200W	0~1200W	0~1200W	0~1200W	0~1200W	0~1200W	0~1200W	0~1200W
<b>Output Voltage Range</b>	0~20V	0~32V	0~40V	0~60V	0~75V	0~150V	0~200V	0~400V	0~600V	0~800V
<b>Output Current Range</b>	0~60A	0~50A	0~40A	0~25A	0~20A	0~10A	0~8A	0~7.5A	0~5A	0~4A
<b>Voltage Display Resolution</b>	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV	1mV	1mV	1mV	1mV	1mV
<b>Current Display Resolution</b>	0.2mA	0.2mA	0.2mA	0.2mA	0.2mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA
<b>Voltage Programming Resolution</b>	1.5mV	1.5mV	1.5mV	1.5mV	1.5mV	3mV	3mV	8mV	12mV	16mV
<b>Current Programming Resolution</b>	2mA	2mA	2mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA
<b>Voltage Setting Accuracy</b>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
<b>Current Setting Accuracy</b>	0.1%+60mA	0.1%+50mA	0.1%+40mA	0.1%+25mA	0.1%+20mA	0.1%+10mA	0.1%+8mA	0.1%+20mA	0.1%+16mA	0.1%+10mA
<b>Voltage Measurement Accuracy</b>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
<b>Current Measurement Accuracy</b>	0.1%+60mA	0.1%+50mA	0.1%+40mA	0.1%+25mA	0.1%+20mA	0.1%+10mA	0.1%+8mA	0.1%+20mA	0.1%+16mA	0.1%+10mA
<b>Voltage Ripple</b>	40mVp-p/6mVrms					120mVp-p/40mVrms		180mVp-p/80mVrms		
<b>Current Ripple</b>	60mA(Full Range) 20mA(TYP Value)	50mA(Full Range) 20mA(TYP Value)	40mA(Full Range) 20mA(TYP Value)	25mA(Full Range) 10mA(TYP Value)	20mA(Full Range) 10mA(TYP Value)	40mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)
<b>Voltage Load Regulation</b>	10mV	10mV	10mV	10mV	10mV	15mV	15mV	30mV	30mV	40mV
<b>Current Load Regulation</b>	60mA	50mA	40mA	25mA	20mA	10mA	8mA	20mA	16mA	10mA
<b>Line Voltage Regulation</b>	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.02%+8mV	0.02%+8mV	0.02%+20mV	0.02%+30mV	0.02%+40mV
<b>Line Current Regulation</b>	4mA	4mA	4mA	4mA	4mA	10mA	30mA	10mA	8mA	10mA
<b>Voltage Temperature Coefficient</b>	100ppm/°C									
<b>Current Temperature Coefficient</b>	150ppm/°C									
<b>DVM Resolution</b>	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV	1mV	1mV	8mV	12mV	16mV
<b>DVM Accuracy</b>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
<b>Operating Mode</b>	Constant Voltage (CV)/ Constant Current (CC)									
<b>Remote Compensation</b>	4V MAX									
<b>Response ( Voltage Rise)</b>	≤10ms	≤10ms	≤10ms	≤10ms	≤10ms	≤25ms	≤30ms	≤60ms	≤60ms	≤60ms
<b>Response (Voltage Drop)</b>	≤150ms (No Load) ≤12ms ( Full Load)	≤150ms (No Load) ≤12ms ( Full Load)	≤150ms (No Load) ≤12ms ( Full Load)	≤100ms (No Load) ≤12ms ( Full Load)	≤100 ms (No Load) ≤12ms ( Full Load)	≤400ms (No Load) ≤21ms ( Full Load)	≤600ms (No Load) ≤36ms ( Full Load)	≤800ms (No Load) ≤72ms ( Full Load)	≤1200ms (No Load) ≤72ms ( Full Load)	≤1200ms (No Load) ≤72ms ( Full Load)
<b>Load Transient RecoveryTime</b>	≤2ms	≤2ms	≤2ms	≤2ms	≤1.5ms	≤2ms	≤3ms	≤3ms	≤3ms	≤3ms
<b>Command Respond Time</b>	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms
<b>Efficiency (Full Load)</b>	84%	89%	89%	90%	90%	89%	90%	90%	90%	90%
<b>Communication Mode</b>	RS232/RS485/USB/LAN					1.RS232/RS485/USB/LAN; 2.RS232/RS485/USB/LAN/GPIB				
<b>Protection Functions</b>	OVP/OCP/OTP/OPP/SCP protection functions									
<b>Net Weight</b>	9.2kg	9.2kg	9.2kg	8.9kg	8.9kg	9.5kg	9.5kg	9.5kg	9.5kg	9.5kg
<b>Weight of Accessory</b>	0.8kg	0.8kg	0.8kg	0.8kg	0.8kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg
<b>Dimension (W x H x D)</b>	483.0x44.0x531.0 mm									
<b>Operating Environment</b>	Temperature: 0°C~40°C,Relative humidity:10%~90% (non-condensing)					Temperature: 0°C~40°C,Relative humidity:10%~90% (non-condensing)				
<b>Cooling</b>	Forced air-cooling									
<b>Certification</b>	CE/UL/CSA/FCC									

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MODE	SP60VDC1500W (1U)	SP75VDC1500W (1U)	SP150VDC1500W (1U)	SP200VDC1500W (1U)	SP400VDC1500W (1U)	SP600VDC1500W (1U)	SP800VDC1500W (1U)
Input Voltage Range	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC
Input Frequency Range	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ
Power Factor	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98
Output Power Range	0~1500W	0~1500W	0~1500W	0~1500W	0~1500W	0~1500W	0~1500W
Output Voltage Range	0~60V	0~75V	0~150V	0~200V	0~400V	0~600V	0~800V
Output Current Range	0~25A	0~20A	0~10A	0~8A	0~7.5A	0~5A	0~4A
Voltage Display Resolution	0.1mV	0.1mV	1mV	1mV	1mV	1mV	1mV
Current Display Resolution	0.2mA	0.2mA	0.2mA	0.1mA	0.1mA	0.1mA	0.1mA
Voltage Programming Resolution	1.5mV	1.5mV	3mV	3mV	8mV	12mV	16mV
Current Programming Resolution	1mA	1mA	1mA	1mA	1mA	1mA	1mA
Voltage Setting Accuracy	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Current Setting Accuracy	0.1%+25mA	0.1%+20mA	0.1%+10mA	0.1%+8mA	0.1%+20mA	0.1%+16mA	0.1%+10mA
Voltage Measurement Accuracy	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Current Measurement Accuracy	0.1%+25mA	0.1%+20mA	0.1%+10mA	0.1%+8mA	0.1%+20mA	0.1%+16mA	0.1%+10mA
Voltage Ripple	40mVp-p/6mVrms		120mVp-p/40mVrms		180mVp-p/80mVrms		
Current Ripple	25mA(Full Range) 10mA(TYP Value)	20mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)
Voltage Load Regulation	10mV	10mV	15mV	15mV	30mV	30mV	40mV
Current Load Regulation	25mA	20mA	10mA	8mA	20mA	16mA	10mA
Line Voltage Regulation	0.005%+1mV	0.005%+1mV	0.02%+8mV	0.02%+8mV	0.02%+20mV	0.02%+30mV	0.02%+40mV
Line Current Regulation	4mA	4mA	10mA	30mA	10mA	8mA	10mA
Voltage Temperature Coefficient	100ppm/°C						
Current Temperature Coefficient	150ppm/°C						
DVM Resolution	0.1mV	0.1mV	1mV	1mV	8mV	12mV	16mV
DVM Accuracy	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Operating Mode	Constant Voltage (CV) / Constant Current (CC)						
Remote Compensation	4V MAX						
Response (Voltage Rise)	≤10ms	≤10ms	≤25ms	≤30ms	≤60ms	≤60ms	≤60ms
Response (Voltage Drop)	≤100ms (No Load) ≤10ms (Full Load)	≤100 ms (No Load) ≤10ms (Full Load)	≤400ms (No Load) ≤18ms (Full Load)	≤600ms (No Load) ≤30ms (Full Load)	≤800ms (No Load) ≤60ms (Full Load)	≤1200ms (No Load) ≤60ms (Full Load)	≤1200ms (No Load) ≤60ms (Full Load)
Load Transient Recovery Time	≤1.5ms	≤1.5ms	≤2ms	≤3ms	≤3ms	≤3ms	≤3ms
Command Respond Time	50ms	50ms	50ms	50ms	50ms	50ms	50ms
Efficiency (Full Load)	91%	91%	90%	91%	91%	91%	91%
Communication Mode	RS232/RS485/USB/LAN						
Protection Functions	OVP/OCV/OTP/OPP/SCP protection functions						
Net Weight	8.9kg	8.9kg	9.5kg	9.5kg	9.5kg	9.5kg	9.5kg
Weight of Accessory	0.8kg	0.8kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg
Dimension (W x H x D)	483.0x44.0x531.0 mm						
Operating Environment	Temperature: 0°C~40°C, Relative humidity: 10%~90% (non-condensing)						
Cooling	Forced air-cooling						
Certification	CE/UL/CSA/FCC						

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MODE	SP32VDC1600W(1U)	SP40VDC1600W(1U)
Input Voltage Range	90~265VAC	90~265VAC
Input Frequency Range	47~63HZ	47~63HZ
Power Factor	>0.98	>0.98
Output Power Range	0~1600W	0~1600W
Output Voltage Range	0~32V	0~40V
Output Current Range	0~50A	0~40A
Voltage Display Resolution	0.1mV	0.1mV
Current Display Resolution	0.2mA	0.2mA
Voltage Programming Resolution	1.5mV	1.5mV
Current Programming Resolution	2mA	2mA
Voltage Setting Accuracy	0.05%+15mV	0.05%+15mV
Current Setting Accuracy	0.1%+50mA	0.1%+40mA
Voltage Measurement Accuracy	0.05%+15mV	0.05%+15mV
Current Measurement Accuracy	0.1%+50mA	0.1%+40mA
Voltage Ripple	40mVp-p/6mVrms	
Current Ripple	50mA(Full Range) 20mA(TYP Value)	40mA(Full Range) 20mA(TYP Value)
Voltage Load Regulation	10mV	10mV
Current Load Regulation	50mA	40mA
Line Voltage Regulation	0.005%+1mV	0.005%+1mV
Line Current Regulation	4mA	4mA
Voltage Temperature Coefficient	100ppm/°C	
Current Temperature Coefficient	150ppm/°C	
DVM Resolution	0.1mV	0.1mV
DVM Accuracy	0.05%+15mV	0.05%+15mV
Operating Mode	Constant Voltage (CV)/ Constant Current (CC)	
Remote Compensation	4V MAX	
Response ( Voltage Rise)	≤10ms	≤10ms
Response (Voltage Drop)	≤150ms (No Load) ≤10ms( Full Load)	≤150 ms (No Load) ≤10ms( Full Load)
Load Transient RecoveryTime	≤2ms	≤2ms
Command Respond Time	50ms	50ms
Efficiency (Full Load)	89%	90%
Communication Mode	RS232/RS485/USB/LAN	
Protection Functions	OVP/OC/OTP/OPP/SCP protection functions	
Net Weight	9.2kg	9.2kg
Weight of Accessory	0.8kg	0.8kg
Dimension (W x H x D)	483.0x44.0x531.0 mm	
Operating Environment	Temperature: 0°C~40°C,Relative humidity:10%~90% (non-condensing)	
Cooling	Forced Cooling	
Certification	CE/UL/CSA/FCC	

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New Zealand		



MODE	SPS20VDC1000W (2U)	SPS40VDC1000W (2U)	SPS75VDC1000W (2U)	SPS120VDC1000W (2U)	SPS150VDC1000W (2U)	SPS200VDC1000W (2U)	SPS400VDC1000W (2U)	SPS600VDC1000W (2U)	SPS800VDC1000W (2U)	
Input Voltage Range	90-265VAC	90-265VAC	90-265VAC	90-265VAC	90-265VAC	90-265VAC	90-265VAC	90-265VAC	90-265VAC	
Input Frequency Range	47-63HZ	47-63HZ	47-63HZ	47-63HZ	47-63HZ	47-63HZ	47-63HZ	47-63HZ	47-63HZ	
Power Factor	>0.97	>0.97	>0.97	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	
Output Power Range	0-1000W	0-1000W	0-1000W	0-1000W	0-1000W	0-1000W	0-1000W	0-1000W	0-1000W	
Output Voltage Range	0-20V	0-40V	0-75V	0-120V	0-150V	0-200V	0-400V	0-600V	0-800V	
Output Current Range	0-200A	0-120A	0-50A	0-40A	0-30A	0-24A	0-15A	0-10A	0-7.5A	
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	1mV	1mV	1mV	1mV	1mV	1mV	
Current Display Resolution	1mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA	
Voltage Programming Resolution	1mV	1mV	2mV	3mV	3mV	4mV	8mV	12mV	16mV	
Current Programming Resolution	3mA	3mA	2mA	1mA	1mA	1mA	1mA	1mA	1mA	
Voltage Setting Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV	
Current Setting Accuracy	0.1%+200mA	0.1%+120mA	0.1%+50mA	0.1%+40mA	0.1%+30mA	0.1%+24mA	0.1%+24mA	0.1%+15mA	0.1%+20mA	
Voltage Measurement Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV	
Current Measurement Accuracy	0.1%+200mA	0.1%+120mA	0.1%+50mA	0.1%+40mA	0.1%+30mA	0.1%+24mA	0.1%+24mA	0.1%+15mA	0.1%+20mA	
Voltage Ripple	40mVp-p/6mVrms	150mV(Full Range) 40mV(TYP Value)	50mV(Full Range) 10mV(TYP Value)	60mV(Full Range) 10mV(TYP Value)	60mV(Full Range) 10mV(TYP Value)	50mV(Full Range) 20mV(TYP Value)	40mV(Full Range) 10mV(TYP Value)	40mV(Full Range) 10mV(TYP Value)	40mV(Full Range) 10mV(TYP Value)	
Current Ripple	150mA(Full Range) 40mA(TYP Value)	150mA(Full Range) 20mA(TYP Value)	50mA(Full Range) 10mA(TYP Value)	60mA(Full Range) 10mA(TYP Value)	60mA(Full Range) 10mA(TYP Value)	50mA(Full Range) 20mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	
Voltage Load Regulation	15mV	15mV	15mV	15mV	15mV	15mV	30mV	30mV	40mV	
Current Load Regulation	200mA	120mA	50mA	40mA	30mA	24mA	24mA	30mA	20mA	
Line Voltage Regulation	0.02%+8mV	0.02%+8mV	0.02%+8mV	0.02%+8mV	0.02%+8mV	0.02%+8mV	0.01%+20mV	0.01%+30mV	0.01%+40mV	
Line Current Regulation	30mA	30mA	30mA	40mA	30mA	30mA	24mA	15mA	20mA	
Voltage Temperature Coefficient	100ppm/°C									
Current Temperature Coefficient	150ppm/°C									
DVM Resolution	0.1mV	0.1mV	0.1mV	1mV	1mV	1mV	8mV	12mV	16mV	
DVM Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV	
Operating Mode	Constant Voltage (CV) / Constant Current (CC)									
Remote Compensation	4V MAX		5V MAX							
Response ( Voltage Rise)	≤10ms	≤10ms	≤15ms	≤20ms	≤25ms	≤30ms	≤60ms	≤60ms	≤60ms	
Response (Voltage Drop)	≤200ms (No Load) ≤20ms ( Full Load)	≤350ms (No Load) ≤30ms ( Full Load)	≤450ms (No Load) ≤60ms ( Full Load)	≤350ms (No Load) ≤30ms ( Full Load)	≤500ms (No Load) ≤35ms ( Full Load)	≤500ms (No Load) ≤35ms ( Full Load)	≤1200ms (No Load) ≤110ms ( Full Load)	≤1200ms (No Load) ≤110ms ( Full Load)	≤1200ms (No Load) ≤110ms ( Full Load)	
Load Transient Recovery Time	≤2ms							≤3ms	≤3ms	≤3ms
Command Respond Time	50ms									
Efficiency (Full Load)	86%	87%	88%	88%	88%	88%	91%	91%	91%	
Communication Mode	1.RS232/RS485/USB/LAN;2.RS232/RS485/USB/LAN/GPIB									
Protection Functions	OVP/OCP/OTP/OPP/SCP protection functions									
Net Weight	14.7kg	14.7kg	13.2kg	13.2kg	13.2kg	13.2kg	14.7kg	14.7kg	14.7kg	
Weight of Accessory	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	
Dimension (W x H x D)	483.0x87.0x626.0 mm		483.0x87.0x581.0 mm							
Operating Environment	Temperature: 0°C~40°C,Relative humidity:10%~90% (non-condensing)									
Cooling	Forced air-cooling									
Certification	CE/UL/CSA/FCC									

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MODE	SP20VDC2000W (2U)	SP40VDC2000W (2U)	SP75VDC2000W (2U)	SP80VDC2000W (2U)	SP120VDC2000W (2U)	SP150VDC2000W (2U)	SP200VDC2000W (2U)	SP400VDC2000W (2U)	SP600VDC2000W (2U)	SP800VDC2000W (2U)
Input Voltage Range	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC
Input Frequency Range	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ
Power Factor	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98
Output Power Range	0~2000W	0~2000W	0~2000W	0~2000W	0~2000W	0~2000W	0~2000W	0~2000W	0~2000W	0~2000W
Output Voltage Range	0~20V	0~40V	0~75V	0~80V	0~120V	0~150V	0~200V	0~400V	0~600V	0~800V
Output Current Range	0~200A	0~120A	0~50A	0~60A	0~40A	0~30A	0~24A	0~15A	0~10A	0~7.5A
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	0.1mV	1mV	1mV	1mV	1mV	1mV	1mV
Current Display Resolution	1mA	1mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA
Voltage Programming Resolution	1mV	1mV	2mV	2mV	3mV	3mV	4mV	8mV	12mV	16mV
Current Programming Resolution	3mA	3mA	2mA	2mA	1mA	1mA	1mA	1mA	1mA	1mA
Voltage Setting Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Current Setting Accuracy	0.1%+200mA	0.1%+120mA	0.1%+50mA	0.1%+60mA	0.1%+40mA	0.1%+30mA	0.1%+24mA	0.1%+24mA	0.1%+15mA	0.1%+20mA
Voltage Measurement Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Current Measurement Accuracy	0.1%+200mA	0.1%+120mA	0.1%+50mA	0.1%+60mA	0.1%+40mA	0.1%+30mA	0.1%+24mA	0.1%+24mA	0.1%+15mA	0.1%+20mA
Voltage Ripple	40mVp-p/6mVrms				80mVp-p/15mVrms		150mVp-p/30mVrms	180mVp-p/80mVrms		
Current Ripple	150mA(Full Range) 40mA(TYP Value)	150mA(Full Range) 20mA(TYP Value)	50mA(Full Range) 10mA(TYP Value)	50mA(Full Range) 10mA(TYP Value)	60mA(Full Range) 10mA(TYP Value)	60mA(Full Range) 10mA(TYP Value)	50mA(Full Range) 20mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)
Voltage Load Regulation	15mV	15mV	15mV	15mV	15mV	15mV	15mV	30mV	30mV	40mV
Current Load Regulation	200mA	120mA	50mA	60mA	30mA	30mA	24mA	24mA	30mA	20mA
Line Voltage Regulation	0.01%+8mV	0.01%+8mV	0.01%+8mV	0.01%+8mV	0.02%+8mV	0.02%+8mV	0.02%+8mV	0.01%+20mV	0.01%+30mV	0.01%+40mV
Line Current Regulation	30mA	30mA	30mA	30mA	30mA	30mA	30mA	24mA	15mA	20mA
Voltage Temperature Coefficient	100ppm/°C									
Current Temperature Coefficient	150ppm/°C									
DVM Resolution	0.1mV	0.1mV	0.1mV	0.1mV	1mV	1mV	1mV	8mV	12mV	16mV
DVM Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Operating Mode	Constant Voltage (CV)/ Constant Current (CC)									
Remote Compensation	4V MAX					5V MAX				
Response ( Voltage Rise)	≤10ms	≤10ms	≤15ms	≤15ms	≤20ms	≤25ms	≤30ms	≤60ms	≤60ms	≤60ms
Response (Voltage Drop)	≤200ms (No Load) ≤15ms( Full Load)	≤350ms (No Load) ≤18ms( Full Load)	≤450ms (No Load) ≤30ms( Full Load)	≤450ms (No Load) ≤30ms( Full Load)	≤350 ms (No Load) ≤27ms( Full Load)	≤500 ms (No Load) ≤36ms( Full Load)	≤500ms (No Load) ≤30ms( Full Load)	≤1200ms (No Load) ≤90ms( Full Load)	≤1200ms (No Load) ≤90ms( Full Load)	≤1200ms (No Load) ≤90ms( Full Load)
Load Transient RecoveryTime	≤2ms	≤2ms	≤2ms	≤2ms	≤3ms	≤3ms	≤3ms	≤3ms	≤3ms	≤3ms
Command Respond Time	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms
Efficiency (Full Load)	86%	88%	88%	89%	89%	90%	90%	91%	91%	91%
Communication Mode	1.RS232/RS485/USB/LAN; 2.RS232/RS485/USB/LAN/GPIB									
Protection Functions	OVP/OCP/OTP/OPP/SCP protection functions									
Net Weight	14.7kg	14.7kg	13.2kg	13.2kg	13.2kg	13.2kg	13.2kg	14.7kg	14.7kg	14.7kg
Weight of Accessory	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg
Dimension (W x H x D)	483.0x87.0x626.0 mm		483.0x87.0x581.0 mm							
Operating Environment	Temperature: 0°C~40°C,Relative humidity:10%~90% (non-condensing)									
Cooling	Forced air-cooling									
Certification	CE/UL/CSA/FCC									

Note:  
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Worldwide Distribution and Service Network	
USA	UK
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Canada	Brazil
Australia	Austria
Germany	Switzerland
New Zealand	

MODE	SP20VDC3000W (2U)	SP32VDC3000W (2U)	SP40VDC3000W (2U)	SP75VDC3000W (2U)	SP80VDC3000W (2U)	SP120VDC3000W (2U)	SP150VDC3000W (2U)	SP200VDC3000W (2U)	SP400VDC3000W (2U)	SP600VDC3000W (2U)	SP800VDC3000W (2U)	
<b>Input Voltage Range</b>	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	
<b>Input Frequency Range</b>	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	
<b>Power Factor</b>	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	
<b>Output Power Range</b>	0~3000W	0~3000W	0~3000W	0~3000W	0~3000W	0~3000W	0~3000W	0~3000W	0~3000W	0~3000W	0~3000W	
<b>Output Voltage Range</b>	0~20V	0~32V	0~40V	0~75V	0~80V	0~120V	0~150V	0~200V	0~400V	0~600V	0~800V	
<b>Output Current Range</b>	0~200A	0~120A	0~120A	0~50A	0~60A	0~40A	0~30A	0~24A	0~15A	0~10A	0~7.5A	
<b>Voltage Display Resolution</b>	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV	1mV	1mV	1mV	1mV	1mV	1mV	
<b>Current Display Resolution</b>	1mA	1mA	1mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA	
<b>Voltage Programming Resolution</b>	1mV	1mV	1mV	2mV	2mV	3mV	3mV	4mV	8mV	12mV	16mV	
<b>Current Programming Resolution</b>	3mA	3mA	3mA	2mA	2mA	1mA	1mA	1mA	1mA	1mA	1mA	
<b>Voltage Setting Accuracy</b>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV	
<b>Current Setting Accuracy</b>	0.1%+200mA	0.1%+120mA	0.1%+120mA	0.1%+50mA	0.1%+60mA	0.1%+30mA	0.1%+30mA	0.1%+24mA	0.1%+24mA	0.1%+15mA	0.1%+20mA	
<b>Voltage Measurement Accuracy</b>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV	
<b>Current Measurement Accuracy</b>	0.1%+200mA	0.1%+120mA	0.1%+120mA	0.1%+50mA	0.1%+60mA	0.1%+30mA	0.1%+30mA	0.1%+24mA	0.1%+24mA	0.1%+15mA	0.1%+20mA	
<b>Voltage Ripple</b>	40mVp-p/6mVrms					80mVp-p/15mVrms		150mVp-p/30mVrms				180mVp-p/80mVrms
<b>Current Ripple</b>	300mA(Full Range) 80mA(TYP Value)	150mA(Full Range) 20mA(TYP Value)	150mA(Full Range) 20mA(TYP Value)	50mA(Full Range) 10mA(TYP Value)	50mA(Full Range) 10mA(TYP Value)	60mA(Full Range) 10mA(TYP Value)	60mA(Full Range) 10mA(TYP Value)	50mA(Full Range) 20mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	
<b>Voltage Load Regulation</b>	15mV	15mV	15mV	15mV	15mV	15mV	15mV	25mV	30mV	30mV	40mV	
<b>Current Load Regulation</b>	200mA	120mA	120mA	50mA	60mA	30mA	30mA	24mA	24mA	30mA	20mA	
<b>Line Voltage Regulation</b>	0.01%+8mV	0.01%+8mV	0.01%+8mV	0.01%+8mV	0.01%+8mV	0.02%+8mV	0.02%+8mV	0.02%+8mV	0.01%+20mV	0.01%+30mV	0.01%+40mV	
<b>Line Current Regulation</b>	30mA	30mA	30mA	30mA	30mA	30mA	30mA	30mA	24mA	15mA	20mA	
<b>Voltage Temperature Coefficient</b>	100ppm/°C											
<b>Current Temperature Coefficient</b>	150ppm/°C											
<b>DVM Resolution</b>	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV	1mV	1mV	1mV	8mV	12mV	16mV	
<b>DVM Accuracy</b>	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	
<b>Operating Mode</b>	Constant Voltage (CV)/ Constant Current (CC)											
<b>Remote Compensation</b>	4V MAX			5V MAX		4V MAX		5V MAX				
<b>Response (Voltage Rise)</b>	≤10ms	≤10ms	≤10ms	≤15ms	≤15ms	≤20ms	≤25ms	≤30ms	≤60ms	≤60ms	≤60ms	
<b>Response (Voltage Drop)</b>	≤300ms (No Load) ≤12ms (Full Load)	≤350ms (No Load) ≤12ms (Full Load)	≤350ms (No Load) ≤12ms (Full Load)	≤450ms (No Load) ≤25ms (Full Load)	≤450ms (No Load) ≤30ms (Full Load)	≤350ms (No Load) ≤21ms (Full Load)	≤500ms (No Load) ≤25ms (Full Load)	≤500ms (No Load) ≤25ms (Full Load)	≤1200ms (No Load) ≤75ms (Full Load)	≤1200ms (No Load) ≤75ms (Full Load)	≤1200ms (No Load) ≤75ms (Full Load)	
<b>Load Transient Recovery Time</b>	≤2ms	≤2ms	≤2ms	≤2ms	≤2ms	≤2ms	≤2.5ms	≤3ms	≤3ms	≤3ms	≤3ms	
<b>Command Respond Time</b>	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms	
<b>Efficiency (Full Load)</b>	86%	88%	88%	91%	91%	91%	92%	91%	91%	91%	91%	
<b>Communication Mode</b>	1.RS232/RS485/USB/LAN; 2.RS232/RS485/USB/LAN/GPIB											
<b>Protection Functions</b>	OVP/OCV/OTP/OPP/SCP protection functions											
<b>Net Weight</b>	14.7kg	14.7kg	14.7kg	13.2kg	13.2kg	13.2kg	13.2kg	13.2kg	14.7kg	14.7kg	14.7kg	
<b>Weight of Accessory</b>	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	
<b>Dimension (W x H x D)</b>	483.0x87.0x626.0 mm			483.0x87.0x581.0 mm								
<b>Operating Environment</b>	Temperature: 0°C~40°C,Relative humidity:10%~90% (non-condensing)											
<b>Cooling</b>	Forced air-cooling											
<b>Certification</b>	CE/UL/CSA/FCC											

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Worldwide Distribution and Service Network	
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Italy	Korea
France	Israel
Canada	Brazil
Australia	Austria
Germany	Switzerland
New Zealand	

MODE	SP20VDC4000W (2U)	SP40VDC4000W (2U)	SP75VDC4000W (2U)	SP120VDC4000W (2U)	SP150VDC4000W (2U)	SP200VDC4000W (2U)	SP400VDC4000W (2U)	SP600VDC4000W (2U)	SP800VDC4000W (2U)
Input Voltage Range	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC	190~265VAC
Input Frequency Range	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ	47~63HZ
Power Factor	>0.99	>0.99	>0.99	>0.99	>0.99	>0.99	>0.98	>0.98	>0.98
Output Power Range	0~4000W	0~4000W	0~4000W	0~4000W	0~4000W	0~4000W	0~4000W	0~4000W	0~4000W
Output Voltage Range	0~20V	0~40V	0~75V	0~120V	0~150V	0~200V	0~400V	0~600V	0~800V
Output Current Range	0~200A	0~120A	0~60A	0~40A	0~30A	0~20A	0~15A	0~10A	0~7.5A
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV	1mV	1mV	1mV
Current Display Resolution	1mA	1mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA
Voltage Programming Resolution	1mV	1mV	2mV	3mV	3mV	4mV	8mV	12mV	16mV
Current Programming Resolution	3mA	3mA	2mA	1mA	1mA	1mA	1mA	1mA	1mA
Voltage Setting Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Current Setting Accuracy	0.1%+200mA	0.1%+120mA	0.1%+60mA	0.1%+40mA	0.1%+30mA	0.1%+24mA	0.1%+24mA	0.1%+15mA	0.1%+20mA
Voltage Measurement Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Current Measurement Accuracy	0.1%+200mA	0.1%+120mA	0.1%+60mA	0.1%+40mA	0.1%+30mA	0.1%+24mA	0.1%+24mA	0.1%+15mA	0.1%+20mA
Voltage Ripple	40mVp-p/6mVrms	40mVp-p/6mVrms	40mVp-p/8mVrms	80mVp-p/15mVrms	80mVp-p/15mVrms	150mVp-p/30mVrms	180mVp-p/80mVrms		
Current Ripple	300mA(Full Range) 80mA(TYP Value)	150mA(Full Range) 20mA(TYP Value)	60mA(Full Range) 10mA(TYP Value)	60mA(Full Range) 10mA(TYP Value)	60mA(Full Range) 10mA(TYP Value)	50mA(Full Range) 20mA(TYP Value)	40mA(Full Range) 20mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)	40mA(Full Range) 10mA(TYP Value)
Voltage Load Regulation	15mV	15mV	15mV	15mV	15mV	15mV	30mV	30mV	40mV
Current Load Regulation	200mA	120mA	60mA	40mA	30mA	24mA	24mA	30mA	20mA
Line Voltage Regulation	0.01%+8mV	0.01%+8mV	0.01%+8mV	0.02%+8mV	0.02%+8mV	0.02%+8mV	0.01%+20mV	0.01%+30mV	0.01%+40mV
Line Current Regulation	30mA	30mA	30mA	30mA	30mA	30mA	24mA	15mA	20mA
Voltage Temperature Coefficient	100ppm/°C								
Current Temperature Coefficient	150ppm/°C								
DVM Resolution	0.1mV	0.1mV	0.1mV	1mV	1mV	1mV	8mV	12mV	16mV
DVM Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Operating Mode	Constant Voltage (CV)/ Constant Current (CC)								
Remote Compensation	4V MAX		5V MAX						
Response (Voltage Rise)	≤15ms	≤15ms	≤15ms	≤20ms	≤30ms	≤30ms	≤60ms	≤60ms	≤60ms
Response (Voltage Drop)	≤300ms (No Load) ≤10ms (Full Load)	≤350ms (No Load) ≤10ms (Full Load)	≤450ms (No Load) ≤20ms (Full Load)	≤350ms (No Load) ≤18ms (Full Load)	≤500ms (No Load) ≤20ms (Full Load)	≤500ms (No Load) ≤20ms (Full Load)	≤1200ms (No Load) ≤60ms (Full Load)	≤1200ms (No Load) ≤60ms (Full Load)	≤1200ms (No Load) ≤60ms (Full Load)
Load Transient Recovery Time	≤2ms	≤2ms	≤2ms	≤2ms	≤2.5ms	≤3ms	≤3ms	≤3ms	≤3ms
Command Respond Time	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms	50ms
Efficiency (Full Load)	90%	91%	91%	92%	93%	92%	92%	92%	92%
Communication Mode	1.RS232/RS485/USB/LAN; 2.RS232/RS485/USB/LAN/GPIB								
Protection Functions	OVP/OCV/OTP/OPP/SCP protection functions								
Net Weight	14.7kg	14.7kg	13.2kg	13.2kg	13.2kg	13.2kg	14.7kg	14.7kg	14.7kg
Weight of Accessory	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg
Dimension (W x H x D)	483.0x87.0x626.0 mm		483.0x87.0x581.0 mm						
Operating Environment	Temperature: 0°C~40°C, Relative humidity: 10%~90% (non-condensing)								
Cooling	Forced air-cooling								
Certification	CE/UL/CSA/FCC								

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