



# SP Series 1000W Programmable DC Power Supply

SP Series 1000W programmable DC power supply has the features including high precision and resolution, high efficiency low ripple, complete multiple protection, Master/Slave Series/Parallel modes, and multiple communication interfaces, which allow a more flexible and convenience use of the power supply.



## Features



- \* 1 kW / 1U high power density.
- \* Master /slave parallel & series operation modes for up to 4 units.
- \* With accurate voltage and current measurement capability.
- \* High-speed programmable interface.
- \* Coded knob, multifunctional keyboard.
- \* Freely switchover between constant voltage (CV) and constant current (CC) operating modes.
- \* Voltage rate of rise and drop functions.
- \* Equips with LIST waveform editing function.
- \* Protection functions: OVP, OCP, OPP, SCP and OTP.
- \* Standard RS232, RS485, LAN and USB communication interfaces (ports).
- \* Use the Standard Commands for Programmable Instrumentation (SCPI) communication protocol.
- \* Standard analog external remote inputs.
- \* Remote sensing line voltage-drop compensation.
- \* DVM independent measurement function.
- \* Have obtained CE, UL, CSA ,FCC and other certifications.

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Model	SP20VDC1000W	SP32VDC1000W	SP40VDC1000W	SP60VDC1000W	SP75VDC1000W
Input Voltage Range	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC
Input Frequency Range	47~63Hz	47~63Hz	47~63Hz	47~63Hz	47~63Hz
Power Factor	>0.98	>0.98	>0.98	>0.98	>0.98
Output Power Range	0~1000W	0~1000W	0~1000W	0~1000W	0~1000W
Output Voltage Range	0~20V	0~32V	0~40V	0~60V	0~75V
Output Current Range	0~60A	0~50A	0~40A	0~25A	0~20A
Voltage Display resolution	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV
Current Display Resolution	0.2mA	0.2mA	0.2mA	0.2mA	0.2mA
Voltage Programmable Resolution	1.5mV	1.5mV	1.5mV	1.5mV	1.5mV
Current Programmable Resolution	2mA	2mA	2mA	1mA	1mA
Voltage Setting Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV
Current Setting Accuracy	0.1%+60mA	0.1%+50mA	0.1%+40mA	0.1%+25mA	0.1%+20mA
Voltage Measurement Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV
Current Measurement Accuracy	0.1%+60mA	0.1%+50mA	0.1%+40mA	0.1%+25 mA	0.1%+20mA
Voltage Ripple	40mVp-p/6mVrms				
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)
Voltage Load Regulation	10mV	10mV	10mV	10mV	10mV
Current Load Regulation	60mA	50mA	40mA	25mA	20mA
Line Voltage Regulation	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV
Line Current Regulation	4mA	4mA	4mA	4mA	4mA
Voltage Temperature Coefficient	100ppm/°C				
Current Temperature Coefficient	150ppm/°C				
DVM Resolution	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV
DVM Accuracy	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV
Operating Mode	Constant voltage (CV) / Constant Current (CC)				
Remote Compensation	4V MAX				
Response ( Voltage Rise)	≤10ms	≤12ms	≤15ms	≤10ms	≤10ms
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)
Load Transient Recovery Time	≤2ms	≤2ms	≤2ms	≤2ms	≤2ms
Command Respond Time	50ms	50ms	50ms	50ms	50ms
Efficiency (Full Load)	83%	89%	89%	89%	89%
Communication Modes	RS232/RS485/USB/LAN				
Protection Functions	OVP/OCP/OTP/OPP/SCP protection functions				
Net Weight	9.2kg	9.2kg	9.2kg	8.9kg	8.9kg
Weight of Accessories	0.8kg	0.8kg	0.8kg	0.8kg	0.8kg
Dimensions (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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Model	SP150VDC1000W	SP200VDC1000W	SP400VDC1000W	SP600VDC1000W	SP800VDC1000W
Input Voltage Range	90~265VAC	90~265VAC	90~265VAC	90~265VAC	90~265VAC
Input Frequency Range	47~63Hz	47~63Hz	47~63Hz	47~63Hz	47~63Hz
Power Factor	>0.98	>0.98	>0.98	>0.98	>0.98
Output Power Range	0~1000W	0~1000W	0~1000W	0~1000W	0~1000W
Output Voltage Range	0~150V	0~200V	0~400V	0~600V	0~800V
Output Current Range	0~10A	0~8A	0~7.5A	0~5A	0~4A
Voltage Display resolution	1mV	1mV	1mV	1mV	1mV
Current Display Resolution	0.2mA	0.2mA	0.1mA	0.1mA	0.1mA
Voltage Programmable Resolution	3mV	3mV	8mV	12mV	16mV
Current Programmable Resolution	1mA	1mA	1mA	1mA	1mA
Voltage Setting Accuracy	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Current Setting Accuracy	0.1%+10mA	0.1%+8mA	0.1%+20mA	0.1%+16mA	0.1%+10mA
Voltage Measurement Accuracy	0.1%+15mV	0.1%+15mV	0.05%+100mV	0.05%+150mV	0.05%+200mV
Current Measurement Accuracy	0.1%+10mA	0.1%+8mA	0.1%+20mA	0.1%+16mA	0.1%+10mA
Voltage Ripple	120mVp-p/40mVrms		180mVp-p/80mVrms		
Current Ripple	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	15mV	15mV	30mV	30mV	40mV
Current Load Regulation	10mA	8mA	20mA	16mA	10mA
Line Voltage Regulation	0.02%+8mV	0.02%+8mV	0.02%+20mV	0.02%+30mV	0.02%+40mV
Line Current Regulation	10mA	30mA	10mA	8mA	10mA
Voltage Temperature Coefficient	100ppm/°C				
Current Temperature Coefficient	150ppm/°C				
DVM Resolution	1mV	1mV	8mV	12mV	16mV
DVM Accuracy	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)	≤25ms	≤30ms	≤60ms	≤60ms	≤60ms
Response ( Voltage Drop)	≤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	≤3ms	≤3ms	≤3ms	≤3ms
Command Respond Time	50ms	50ms	50ms	50ms	50ms
Efficiency (Full Load)	89%	89%	90%	90%	90%
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB				
Protection Functions	OVP/OCP/OTP/OPP/SCP protection functions				
Net Weight	9.5kg	9.5kg	9.5kg	9.5kg	9.5kg
Weight of Accessories	1.0kg	1.0kg	1.0kg	1.0kg	1.0kg
Dimensions (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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