APM Technologies

Efficiency, Stability, Reliable, Precision

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

>> Product specification sheet







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Contents

SP20VDC600W	01
SP32VDC600W	01
SP40VDC600W	01
SP75VDC600W	01
SP150VDC600W	01
SP200VDC600W	01
SP20VDC1000W	02
SP32VDC1000W	02
SP40VDC1000W	02
SP75VDC1000W	02
SP150VDC1000W	02
SP200VDC1000W	02
SP20VDC1200W	03
SP32VDC1200W	03
SP40VDC1200W	03
SP75VDC1200W	03
SP150VDC1200W	03
SP200VDC1200W	03
SP75VDC1500W	04
SP150VDC1500W	04
SP200VDC1500W	04
SP32VDC1600W	05
SP40VDC1600W	05
SPS32VDC1000W	06
SPS40VDC1000W	06
SPS80VDC1000W	06
SPS120VDC1000W	06
000150VD01000W	07
	07
SPS200VDC1000W	07
	07
SPS800VDC1000W	07

SP32VDC2000W	80
SP40VDC2000W	80
SP80VDC2000W	80
SP120VDC2000W	80
SP150VDC2000W	09
SP200VDC2000W	
SP600VDC2000W	
SP800VDC2000W	09
SP32VDC3000W	
SP40VDC3000W	
SP80VDC3000W	10
SP120VDC3000W	10
SP150VDC3000W	
SP200VDC3000W	
SP600VDC3000W	11
SP800VDC3000W	11
SP32VDC4000W	12
SP40VDC4000W	
SP75VDC4000W	
SP120VDC4000W	12
SP150VDC4000W	
SP200VDC4000W	
SP600VDC4000W	13
SP800VDC4000W	13

Selection List:

Model	Voltage	Current	Power	Corresponding page
SP20VDC600W	20V	60A	600W	P01
SP32VDC600W	32V	50A	600W	P01
SP40VDC600W	40V	40A	600W	P01
SP75VDC600W	75V	25A	600W	P01
SP150VDC600W	150V	10A	600W	P01
SP200VDC600W	200V	8A	600W	P01
SP20VDC1000W	20V	60A	1000W	P02
SP32VDC1000W	32V	50A	1000W	P02
SP40VDC1000W	40V	40A	1000W	P02
SP75VDC1000W	75V	25A	1000W	P02
SP150VDC1000W	150V	10A	1000W	P02
SP200VDC1000W	200V	8A	1000W	P02
SP20VDC1200W	20V	60A	1200W	P03
SP32VDC1200W	32V	50A	1200W	P03
SP40VDC1200W	40V	40A	1200W	P03
SP75VDC1200W	75V	25A	1200W	P03
SP150VDC1200W	150V	10A	1200W	P03
SP200VDC1200W	200V	8A	1200W	P03
SP75VDC1500W	75V	25A	1500W	P04
SP150VDC1500W	150V	10A	1500W	P04
SP200VDC1500W	200V	8A	1500W	P04
SP32VDC1600W	32V	50A	1600W	P04
SP40VDC1600W	40V	40A	1600W	P05
SPS32VDC1000W	32V	200A	1000W	P06
SPS40VDC1000W	40V	1200A	1000W	P06
SPS40VDC1000W	80V	60A	1000W	P06
	120V	40A	1000W	P06
SPS120VDC1000W			1000W	
SPS150VDC1000W	150V	30A		P07
SPS200VDC1000W	200V	24A	1000W	P07
SPS600VDC1000W	600V	10A	1000W	P07
SPS800VDC1000W	800V	7.5A	1000W	P07
SP32VDC2000W	32V	200A	2000W	P08
SP40VDC2000W	40V	120A	2000W	P08
SP80VDC2000W	80V	60A	2000W	P08
SP120VDC2000W	120V	40A	2000W	P08
SP150VDC2000W	150V	30A	2000W	P09
SP200VDC2000W	200V	24A	2000W	P09
SP600VDC2000W	600V	10A	2000W	P09
SP800VDC2000W	800V	7.5A	2000W	P09
SP32VDC3000W	32V	200A	3000W	P10
SP40VDC3000W	40V	120A	3000W	P10
SP80VDC3000W	80V	60A	3000W	P10
SP120VDC3000W	120V	40A	3000W	P10
SP150VDC3000W	150V	30A	3000W	P11
SP200VDC3000W	200V	24A	3000W	P11
SP600VDC3000W	600V	10A	3000W	P11
SP800VDC3000W	800V	7.5A	3000W	P11
SP32VDC4000W	32V	200A	4000W	P12
SP40VDC4000W	40V	120A	4000W	P12
SP75VDC4000W	75V	60A	4000W	P12
SP120VDC4000W	120V	40A	4000W	P12
SP150VDC4000W	150V	30A	4000W	P13
SP200VDC4000W	200V	24A	4000W	P13
SP600VDC4000W	600V	10A	4000W	P13
SP800VDC4000W	800V	7.5A	4000W	P13

600W in 1U

Model	SP20VDC600W	SP32VDC600W	SP40VDC600W	SP75VDC600W	SP150VDC600W	SP200VDC600W
			Input			
Input Voltage	90~265VAC					
Input Frequency	47~63Hz					
Power Factor	>0.98					
nput Power	750VA(MAX)					
			Output			
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					
/oltage Load Regulation	10mV	10mV	10mV	10mV	15mV	15mV
Current Load Regulation	60mA	50mA	40mA	25mA	10mA	8mA
/oltage 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
oltage Programmable Resolution	1.5mV	1.5mV	1.5mV	1.5mV	3mV	3mV
Current Programmable Resolution	2mA	2mA	2mA	1mA	1mA	1mA
/oltage Setting Accuracy ^[1]	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
/oltage Measurement Accuracy 👳	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 ^[2]	40mVp-p 6mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	120mVp-p 40mVrms	120mVp-p 40mVrms
Current Ripple ^[3]	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)
ine Regulation(Voltage)	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.02%+8mV	0.02%+8mV
ine Regulation(Current)	4mA	4mA	4mA	4mA	10mA	30mA
oltage Temperature Coefficient [4]	100ppm/°C					
Current Temperature Coefficient [4]	150ppm/°C					
OVM Resolution	0.1mV	0.1mV	0.1mV	0.1mV	4mV	1mV
OVM Precision ¹¹	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+30mV	0.1%+15mV
Dperating Mode	Constant voltage (CV)	Constant current (CC)				
Remote Compensation	4V MAX					
Aaster-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)
oad Transient Recovery Time	≤2ms	≤2ms	≤2ms	≤2ms	≤3ms	≤3ms
Command Response Time	50ms					
Series Capability 6	Up to 10 units	Up to 8 units	Up to 6 units			
Parallel Capability	Up to 10 units					
Current Sharing ¹⁷¹	9V	9V	12V	20V	40V	50V
Efficiency (full load)	85%	86%	87%	88%	88%	87%
	03%	00%	Other	00%	00%	07.%
Protection Function	OVP/OCP/OTP/OPP/S		oulei			
Anti Reverse rrigation Protection	Yes					
nput 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/250VA fast-acting type
Jnit Weight/Shipping Weight	9.2kg/12kg	9.2kg/12kg	9.2kg/12kg	8.9kg/11.7kg	9.3kg/12.7kg	9.3kg/12.7kg
0 11 0 0		sizing/ izing	5.2Ng/ 12Ng	5.5kg/11.7kg	5.5Ng/12.7Ng	2.0Kg/12.7Kg
Dimensions(WxHxD)	423.0x44.0x447.0 mm	ANI: 0 00000/00 105				
Communication Modes	1. RS232/RS485/USB/I					
Operating Environment		elative Humidity 10%~90	1%(no condensation); Pol	lution degree 2, Installatio	on category II, Indoor use	
Cooling Mode	Forced air-cooling					
Altitude	2000m					
nsulation	AC input <->DC output,	4242VDC, AC input <->	PE, 2121VDC			

[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<(lav*2.5% + 5% F.S) A, F.S is the full scale of the current. lav=lsum/n, where lav is average current, lsum 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.

Model	SP20VDC1000W	SP32VDC1000W	SP40VDC1000W	SP75VDC1000W	SP150VDC1000W	SP200VDC1000W
			Input			
nput Voltage	90~265VAC					
nput Frequency	47~63Hz					
Power Factor	>0.98					
Input Power	1300VA(MAX)					
			Output			
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 ^[1]	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 ^{III}	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 ^[2]	40mVp-p 6mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	120mVp-p 40mVrms	120mVp-p 40mVrms
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)	40mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)
ine Regulation(Voltage)	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.02%+8mV	0.02%+8mV
ine Regulation(Current)	4mA	4mA	4mA	4mA	10mA	30mA
/oltage Temperature Coefficient [4]	100ppm/°C					
Current Temperature Coefficient [4]	150ppm/°C					
DVM Resolution	0.1mV	0.1mV	0.1mV	0.1mV	4mV	1mV
OVM Precision ^{III}	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)
oad Transient Recovery Time ^[5]	≤2ms	≤2ms	≤2ms	≤2ms	≤3ms	≤3ms
Command Response Time	50ms					1
Series Capability 161	Up to 10 units	Up to 8 units	Up to 6 units			
Parallel Capability	Up to 10 units					
Current Sharing 🕅	9V	9V	12V	20V	40V	50V
Efficiency (full load)	85%	89%	89%	89%	89%	87%
Protection Function	OVP/OCP/OTP/OPP/S	CP/FOLDBACK	Other			
Anti Reverse rrigation Protection	Yes					
nput Fuse	20A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250V fast-acting type				
Jnit 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	5. 5	5. 5	3	5	J
Communication Modes		_AN; 2. RS232/RS485/	USB/LAN/GPIB			
Operating Environment				lution degree 2, Installatio	on category IL Indoor use	
Cooling Mode	Forced air-cooling	stative framidity 1070-90	in concensation, For	actor degree 2, mataliatit	n sategory n, muoor use.	
Altitude	2000m					
			PE, 2121VDC			

 (1) output of set, when output 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<(lav*2.5% + 5% FS) A, F.S is the full scale of the current. lav=lsum/n, where lav is average current, lsum 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.



1200W in 1U

Model	SP20VDC1200W	SP32VDC1200W	SP40VDC1200W	SP75VDC1200W	SP150VDC1200W	SP200VDC1200W
			Input			
nput Voltage	90~265VAC					
nput Frequency	47~63Hz					
Power Factor	>0.98					
nput Power	1500VA(MAX)					
			Output			
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					
/oltage Load Regulation	10mV	10mV	10mV	10mV	15mV	15mV
Current Load Regulation	60mA	50mA	40mA	25mA	10mA	8mA
/oltage 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
oltage Programmable Resolution	1.5mV	1.5mV	1.5mV	1.5mV	3mV	3mV
current Programmable Resolution	2mA	2mA	2mA	1mA	1mA	1mA
/oltage Setting Accuracy ^[1]	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
oltage Measurement Accuracy ^[1]	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
/oltage Ripple 🛛	40mVp-p 6mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	120mVp-p 40mVrms	120mVp-p 40mVrms
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)	40mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)
ine Regulation(Voltage)	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.02%+8mV	0.02%+8mV
ine Regulation(Current)	4mA	4mA	4mA	4mA	10mA	30mA
oltage Temperature Coefficient [4]	100ppm/°C					
Current Temperature Coefficient [4]	150ppm/°C					
OVM Resolution	0.1mV	0.1mV	0.1mV	0.1mV	4mV	1mV
OVM Precision ¹¹	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+30mV	0.1%+15mV
Dperating Mode	Constant voltage (CV)	Constant current (CC)				
Remote Compensation	4V MAX					
Aaster-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)
oad Transient Recovery Time	≤2ms	≤2ms	≤2ms	≤2ms	≤3ms	≤3ms
command Response Time	50ms	121110	121110	121110	20110	20110
Series Capability 6	Up to 10 units	Up to 8 units	Up to 6 units			
Parallel Capability	Up to 10 units	•				
Current Sharing ¹⁷¹	9V	9V	12V	20V	40V	50V
Efficiency (full load)	84%	84%	89%	90%	89%	90%
			Other			
Protection Function	OVP/OCP/OTP/OPP/S	CP/FOLDBACK				
Anti Reverse rrigation Protection	Yes					
nput Fuse	20A, 125VAC/250VAC, fast-acting type	20A, 125VAC/250VAC, fast-acting type	30A, 125VAC/250VA fast-acting type			
Jnit 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		LAN; 2. RS232/RS485/	USB/LAN/GDIR			
Operating Environment				lution dograe 2. Installation		
sponding chimoninent	Forced air-cooling	elative Humidity 10%~90	%(no condensation); Pol	iution degree 2, installatio	n category II, Indoor Use	
Cooling Mode						
Cooling Mode	2000m					

[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<(lav*2.5% + 5% F.S) A, F.S is the full scale of the current. lav=lsum/n, where lav is average current, lsum 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.



1500W in 1U

Model	SP75VDC1500W	SP150VDC1500W	SP200VDC1500W
		Input	
nput Voltage	90~265VAC		
nput Frequency	47~63Hz		
Power Factor	>0.98		
nput Power	1900VA(MAX)		
		Output	
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
/oltage Display Resolution	0.1mV	1mV	1mV
Current Display Resolution	0.2mA	0.2mA	0.1mA
oltage Programmable Resolution	1.5mV	3mV	3mV
Current Programmable Resolution	1mA	1mA	1mA
/oltage Setting Accuracy ¹¹	0.05%+15mV	0.05%+15mV	0.05%+15mV
Current Setting Accuracy	0.1%+25mA	0.1%+10mA	0.1%+8mA
/oltage Measurement Accuracy ¹¹	0.05%+15mV	0.1%+15mV	0.1%+15mV
Current Measurement Accuracy	0.1%+25mA	0.1%+10mA	0.1%+8mA
Voltage Ripple ^[2]	40mVp-p 6mVrms	120mVp-p 40mVrms	120mVp-p 40mVrms
Current Ripple ¹³¹	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
ine Regulation(Current)	4mA	10mA	30mA
/oltage Temperature Coefficient ^[4]	100ppm/°C		
Current Temperature Coefficient [4]	150ppm/°C		
OVM Resolution	0.1mV	4mV	1mV
DVM Precision ¹¹	0.05%+15mV	0.1%+30mV	0.1%+15mV
Operating Mode	Constant voltage (CV) / Constant currer		
Remote Compensation	4V MAX		
Aaster-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)
oad Transient Recovery Time	≤2ms	≤3ms	≤3ms
Command Response Time	50ms		
Series Capability ¹⁶¹	Up to 10 units	Up to 8 units	Up to 6 units
Parallel Capability	Up to 10 units		
Current Sharing ¹⁷¹	20V	40V	50V
Efficiency (full load)	91%	90%	91%
		Other	
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK		
Anti Reverse rrigation Protection	Yes		
nput Fuse	30A, 125VAC/250VAC, fast-acting type		
Jnit Weight/Shipping Weight	8.9kg/11.7kg	9.3kg/12.7kg	9.3kg/12.7kg
		2.0kg/12.7kg	5.6Kg/ 12.7 Kg
Dimensions(WxHxD)	423.0x44.0x447.0 mm		
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232		
Operating Environment		10%~90%(no condensation); Pollution degree	e 2, installation category II, indoor USE.
Cooling Mode	Forced air-cooling		
Altitude	2000m		
nsulation	AC input <->DC output, 4242VDC, AC in	nput <-> PE, 2121VDC	

[1] % output offset, when output ones are a part of the range show above. [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<(lav*2.5% + 5% FS) A, F.S is the full scale of the current. lav=lsum/n, where lav is average current, lsum 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.

04

1600W in 1U

1600W in 10		
Model	SP32VDC1600W	SP40VDC1600W
	Input	
Input Voltage	90~265VAC	
Input Frequency	47~63Hz	
Power Factor	>0.98	
Input Power	2000VA(MAX)	
	Output	
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 [1]	0.05%+15mV	
Current Setting Accuracy	0.1%+50mA	0.1%+40mA
Voltage Measurement Accuracy ¹¹	0.05%+15mV	0.05%+15mV
Current Measurement Accuracy	0.1%+50mA	0.1%+40mA
Voltage Ripple ^[2]	40mVp-p 6mVrms	
Current Ripple	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 [4]	100ppm/°C	
Current Temperature Coefficient [4]	150ppm/°C	
DVM Resolution	0.1mV	
DVM Precision ^[1]	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 [9]	≤2ms	
Command Response Time	50ms	
Series Capability 6	Up to 10 units	
Parallel Capability	Up to 10 units	
Current Sharing 171	9V	12V
Efficiency (full load)	89%	90%
	Other	
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	
	ut voltage less than 5V offset voltage is 30mV	

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

(1) output of the range of t

[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<(lav*2.5% + 5% FS) A, F.S is the full scale of the current. lav=lsum/n, where lav is average current, lsum 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.

1000W in 2U(1)

Model	SPS32VDC1000W	SPS40VDC1000W	SPS80VDC1000W	SPS120VDC1000W	
		Input			
nput Voltage	90~265VAC				
nput Frequency	47~63Hz				
Power Factor	>0.98	>0.98	>0.97	>0.98	
nput Power	1500VA(MAX)	1300VA(MAX)	1200VA(MAX)	1300VA(MAX)	
		Output			
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	
/oltage Display Resolution	0.1mV	0.1mV	0.1mV	1mV	
Current Display Resolution	1mA	1mA	0.2mA	0.1mA	
/oltage Programmable Resolution	1mV	1mV	1.5mV	3mV	
Current Programmable Resolution		3mA	2mA	1mA	
/oltage Setting Accuracy ^[1]	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	
/oltage Measurement Accuracy ^[1]	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 ^[2]	60mVp-p 10mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	80mVp-p 15mVrms	
Current Ripple	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	
ine Regulation(Current)	200mA	30mA	30mA	40mA	
/oltage Temperature Coefficient [4]	100ppm/°C				
Current Temperature Coefficient [4]	150ppm/°C				
OVM Resolution	0.1mV	0.1mV	0.1mV	1mV	
OVM Precision ¹¹	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV	
Dperating Mode	Constant voltage (CV) / Constant c	urrent (CC)			
Remote Compensation	4V MAX	4V MAX	4V MAX	5V MAX	
Aaster-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 ^[5]	≤2ms				
Command Response Time	50ms				
Series Capability 16	Up to 10 units				
Parallel Capability	Up to 10 units				
Current Sharing ¹⁷¹	12V	12V	20V	30V	
Efficiency (full load)	85%	87%	89%	88%	
		Other	· · · · · · · · · · · · · · · · · · ·		
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDB	ACK			
Anti Reverse Irrigation Protection	No(customers can purchase other accessorie to achieve this function, please consult the salesrepresentative for details)	s Yes	Yes	Yes	
nput 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	
Jnit 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. RS				
Operating Environment			n); Pollution degree 2, Installation cate	gory II, Indoor use.	
Cooling Mode					
	Forced air-cooling				
Altitude	2000m				

[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. 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<(lav*2.5% + 5% FS) A, F.S is the full scale of the current. lav=lsum/n, where lav is average current, lsum 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.



1000W in 2U(2)

Model	SPS150VDC1000W	SPS200VDC1000W	SPS600VDC1000W	SPS800VDC1000W		
		Input				
nput Voltage	90~265VAC					
nput Frequency	47~63Hz					
Power Factor	>0.98					
nput Power	1300VA(MAX)					
		Output				
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					
/oltage Load Regulation	15mV	15mV	30mV	200mV		
Current Load Regulation	30mA	24mA	10mA	20mA		
/oltage Display Resolution	1mV					
Current Display Resolution	0.1mA					
/oltage Programmable Resolution	3mV	4mV	12mV	24mV		
Current Programmable Resolution	1mA					
/oltage Setting Accuracy ¹¹	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		
/oltage Measurement Accuracy ¹¹	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		
/oltage Ripple ^[2]	80mVp-p 15mVrms	150mVp-p 30mVrms	350mVp-p 40mVrms	800mVp-p 200mVrms		
Current Ripple ^[3]	60mA (Full Range) 10mA (TYP Value)	50mA (Full Range) 20mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)		
ine Regulation(Voltage)	0.02%+8mV	0.02%+8mV	0.01%+30mV	0.01%+40mV		
ine Regulation(Current)	30mA	30mA	15mA	15mA		
/oltage Temperature Coefficient [4]	100ppm/°C					
Current Temperature Coefficient	150ppm/°C					
VM Resolution	1mV	1mV	12mV	12mV		
VM Precision ¹¹	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV		
Dperating Mode	Constant voltage (CV) / Const					
Remote Compensation	5V MAX					
Aaster-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)		
oad Transient Recovery Time [5]	≤2ms	≤2ms	≤3ms	≤3ms		
Command Response Time	50ms					
Series Capability ^[6]	Up to 8 units	Up to 6 units	Up to 2 units	Not Recommended		
Parallel Capability	Up to 10 units					
Current Sharing ^{17]}	40V	50V	200V	250V		
Efficiency (full load)	88%	88%	86%	85%		
,		Other				
Protection Function	OVP/OCP/OTP/OPP/SCP/FC					
nti Reverse rigation Protection	Yes					
nput Fuse	30A, 125VAC/250VAC, fast-acting type					
Jnit 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			ı); Pollution degree 2, Installation cate	gory II, Indoor use.		
Cooling Mode	Forced air-cooling	,,	,,			
Altitude	2000m					

[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. 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<(lav*2.5% + 5% FS) A, F.S is the full scale of the current. lav=lsum/n, where lav is average current, lsum 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.

2000W in 2U(1)

Model	SP32VDC2000W	SP40VDC2000W	SP80VDC2000W	SP120VDC2000W
		Input		
nput Voltage	190~265VAC			
nput Frequency	47~63Hz			
Power Factor	>0.98			
nput Power	2600VA(MAX)	2400VA(MAX)	2400VA(MAX)	2400VA(MAX)
		Output		
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
/oltage Display Resolution	0.1mV	0.1mV	0.1mV	1mV
Current Display Resolution	1mA	1mA	0.2mA	0.1mA
/oltage Programmable Resolution	1mV	1mV	1.5mV	3mV
Current Programmable Resolution	6mA	3mA	2mA	1mA
Voltage Setting Accuracy ^[1]	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
/oltage Measurement Accuracy	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
/oltage Ripple ^[2]	60mVp-p 10mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	80mVp-p 15mVrms
Current Ripple ¹⁹	400mA (Full Range) 200mA (TYP Value)	150mA (Full Range) 20mA (TYP Value)	50mA (Full Range) 10mA (TYP Value)	60mA (Full Range) 10mA (TYP Value)
ine Regulation(Voltage)	0.01%+8mV	0.01%+8mV	0.01%+8mV	0.02%+8mV
ine Regulation(Current)	200mA	30mA	30mA	30mA
/oltage Temperature Coefficient [4]	100ppm/°C			
Current Temperature Coefficient	150ppm/°C			
VM Resolution	0.1mV	0.1mV	0.1mV	1mV
VM Precision ¹¹	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV
perating Mode	Constant voltage (CV) / Constant of			
temote Compensation	4V MAX	4V MAX	4V MAX	5V MAX
laster-slave Control	Yes	TT MAA	TT WAX	OT MIAA
esponse (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)
oad Transient Recovery Time [5]	≤2ms	≤2ms	≤2ms	≤3ms
Command Response Time	50ms			
Series Capability ^[6]	Up to 10 units	Up to 10 units	Up to 10 units	Up to 8 units
arallel Capability	Up to 10 units			
Current Sharing ¹⁷¹	12V	12V	20V	30V
Efficiency (full load)	91%	88%	89%	89%
		Other		
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDB			
Anti Reverse rrigation Protection	No(customers can purchase other accessorie to achieve this function, please consult the salesrepresentative for details)		Yes	Yes
nput 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
Jnit Weight/Shipping Weight	14.7kg/18.7kg	14.7kg/18.7kg	13.2kg/16.8kg	13.2kg/16.8kg
Vimensions(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. R			
Operating Environment			n); Pollution degree 2, Installation cate	gory II, Indoor use.
Cooling Mode	Forced air-cooling	,	,	
Altitude	2000m			

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

[1] % output on set, which output is stage to the set of the se [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<(lav*2.5% + 5% FS) A, F.S is the full scale of the current. lav=lsum/n, where lav is average current, lsum 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.



2000W in 2U(2)

Vlodel	SP150VDC2000W	SP200VDC2000W	SP600VDC2000W	SP800VDC2000W			
		Input					
nput Voltage	190~265VAC						
nput Frequency	47~63Hz						
Power Factor	>0.98						
nput Power	2400VA(MAX)	00VA(MAX)					
		Output					
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						
/oltage Load Regulation	15mV	15mV	30mV	200mV			
Current Load Regulation	30mA	24mA	10mA	20mA			
oltage Display Resolution	1mV						
Current Display Resolution	0.1mA						
oltage Programmable Resolution	3mV	4mV	12mV	24mV			
current Programmable Resolution							
/oltage Setting Accuracy ¹¹	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			
/oltage Measurement Accuracy ¹¹	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			
/oltage Ripple ^[2]	40mVp-p 6mVrms	150mVp-p 30mVrms	350mVp-p 40mVrms	800mVp-p 200mVrms			
Current Ripple	60mA (Full Range) 10mA (TYP Value)	50mA (Full Range) 20mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)			
ine Regulation(Voltage)	0.02%+8mV	0.02%+8mV	0.01%+30mV	0.01%+40mV			
ine Regulation(Current)	30mA	30mA	15mA	20mA			
/oltage Temperature Coefficient [#]	100ppm/°C						
Current Temperature Coefficient [4]	150ppm/°C						
VM Resolution	1mV	1mV	12mV	12mV			
VM Precision ¹¹	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV			
perating Mode	Constant voltage (CV) / Consta						
emote Compensation	5V MAX						
Aaster-slave Control	Yes						
esponse (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)			
oad Transient Recovery Time [5]	≤3ms						
command Response Time	50ms						
Series Capability 16	Up to 8 units	Up to 6 units	Up to 2 units	Not Recommended			
arallel Capability	Up to 10 units		-p 11 - 1.110				
Current Sharing ¹⁷¹	40V	50V	200V	250V			
Efficiency (full load)	90%	90%	90%	91%			
		Other	2070				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOL						
Anti Reverse rrigation Protection	Yes						
nput 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			
Init 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 H	lumidity 10%~90%(no condensation	i); Pollution degree 2, Installation cate	gory II, Indoor use.			
Cooling Mode	Forced air-cooling						
Altitude	2000m						
nsulation	AC input <->DC output 4242//	OC, AC input <-> PE, 2121VDC					

[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. 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<(lav*2.5% + 5% FS) A, F.S is the full scale of the current. lav=lsum/n, where lav is average current, lsum 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.



/lodel	SP32VDC3000W	SP40VDC3000W	SP80VDC3000W	SP120VDC3000W
		Input		
nput Voltage	190~265VAC			
nput Frequency	47~63Hz			
Power Factor	>0.98			
nput Power	3700VA(MAX)	3400VA(MAX)	3400VA(MAX)	3400VA(MAX)
		Output		
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			
/oltage Load Regulation	30mV	15mV	15mV	15mV
Current Load Regulation	200mA	120mA	60mA	40mA
/oltage Display Resolution	0.1mV	0.1mV	0.1mV	1mV
Current Display Resolution	1mA	1mA	0.2mA	0.1mA
oltage Programmable Resolution	1mV	1mV	1.5mV	3mV
Current Programmable Resolution	6mA	2mA	2mA	1mA
/oltage Setting Accuracy ¹¹	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
/oltage Measurement Accuracy ¹¹	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
/oltage Ripple ^[2]	60mVp-p 10mVrms	40mVp-p 6mVrms	40mVp-p 6mVrms	80mVp-p 15mVrms
Current Ripple 🔋	400mA (Full Range) 200mA (TYP Value)	150mA (Full Range) 20mA (TYP Value)	50mA (Full Range) 10mA (TYP Value)	60mA (Full Range) 10mA (TYP Value)
ine Regulation(Voltage)	0.01%+8mV	0.01%+8mV	0.01%+8mV	0.02%+8mV
ine Regulation(Current)	200mA	30mA	30mA	30mA
oltage Temperature Coefficient [4]	100ppm/°C			
urrent Temperature Coefficient [4]				
VM Resolution	0.1mV	0.1mV	0.1mV	1mV
VM Precision ¹¹	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV
perating Mode	Constant voltage (CV) / Constant cu			
emote Compensation	4V MAX	4V MAX	4V MAX	5V MAX
laster-slave Control	Yes			000000
esponse (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)
oad Transient Recovery Time	≤2ms			
command Response Time	50ms			
eries Capability 6	Up to 10 units			
Parallel Capability	Up to 10 units			
Current Sharing ¹⁷¹	12V	12V	20V	30V
fficiency (full load)	91%	88%	91%	91%
		Other		
rotection Function	OVP/OCP/OTP/OPP/SCP/FOLDBA			
Anti Reverse rrigation Protection	No(customers can purchase other accessorie to achieve this function, please consult the salesrepresentative for details)		Yes	Yes
nput 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
nit Weight/Shipping Weight	14.7kg/18.7kg	14.7kg/18.7kg	13.2kg/16.8kg	13.2kg/16.8kg
imensions(WxHxD)	423.0x87.0x514.0 mm	423.0x87.0x514.0 mm	423.0x87.0x469.0 mm	423.0x87.0x469.0 mm
Communication Modes	1. R\$232/R\$485/U\$B/LAN; 2. R\$232/R\$485/U\$B/LAN/GPIB			
perating Environment); Pollution degree 2, Installation cate	aory II Indoor use
Cooling Mode	Forced air-cooling	any 1070 9070(110 Condensation	, i onation degree 2, instanation cate	gory 11, 110001 050.
Altitude	2000m			
unude	200011			

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

3000W in 211(1)

(1) output of the models, the 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. 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<(lav*2.5% + 5% FS) A, F.S is the full scale of the current. lav=lsum/n, where lav is average current, lsum 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.

3000W in 2U(2)

Model	SP150VDC3000W	SP200VDC3000W	SP600VDC3000W	SP800VDC3000W		
		Input				
nput Voltage	190~265VAC					
nput Frequency	47~63Hz					
Power Factor	>0.98					
nput Power	3400VA(MAX)					
		Output				
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					
/oltage Programmable Resolution	3mV	4mV	12mV	24mV		
Current Programmable Resolution						
Voltage Setting Accuracy ¹¹	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 ^{III}	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		
	80mVp-p	150mVp-p	350mVp-p	800mVp-p		
Voltage Ripple ^[2]	15mVrms	30mVrms	40mVrms	200mVrms		
Current Ripple 🕫	60mA (Full Range)	50mA (Full Range)	25mA (Full Range)	25mA (Full Range)		
	10mA (TYP Value)	20mA (TYP Value)	10mA (TYP Value)	10mA (TYP Value)		
ine Regulation(Voltage)	0.02%+8mV	0.02%+8mV	0.01%+30mV	0.01%+40mV		
ine Regulation(Current)	30mA	30mA	15mA	20mA		
Voltage Temperature Coefficient ^[4]						
Current Temperature Coefficient ^[4]	150ppm/°C					
OVM Resolution	1mV	1mV	12mV	12mV		
DVM Precision ¹¹	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV		
Operating Mode	Constant voltage (CV) / Consta	int 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)		
oad Transient Recovery Time	≤2.5ms	≤3ms	≤3ms	≤3ms		
Command Response Time	50ms					
Series Capability 161	Up to 8 units	Up to 6 units	Up to 2 units	Not Recommended		
Parallel Capability	Up to 10 units					
Current Sharing ¹⁷¹	40V	50V	200V	250V		
Efficiency (full load)	92%	91%	91%	91%		
		Other				
Protection Function	OVP/OCP/OTP/OPP/SCP/FO	DBACK				
Anti Reverse	V.					
rrigation Protection	Yes					
nput 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		
Jnit 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.					
	Forced air-cooling					
Cooling Mode	·					

[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. 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<(lav*2.5% + 5% FS) A, F.S is the full scale of the current. lav=lsum/n, where lav is average current, lsum 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.

Model	SP32VDC4000W	SP40VDC4000W	SP75VDC4000W	SP120VDC4000W
		Input		
nput Voltage	190~265VAC			
nput Frequency	47~63Hz			
Power Factor	>0.98			
nput Power	4800VA(MAX)	4500VA(MAX)	4500VA(MAX)	4500VA(MAX)
		Output		
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			
/oltage Load Regulation	30mV	15mV	15mV	15mV
Current Load Regulation	200mA	120mA	60mA	40mA
/oltage Display Resolution	0.1mV	0.1mV	0.1mV	1mV
Current Display Resolution	1mA	1mA	0.1mA	0.1mA
/oltage Programmable Resolution	1mV	1mV	2mV	3mV
Current Programmable Resolution		3mA	2mA	1mA
Voltage Setting Accuracy ¹¹	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 ¹¹	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 ^[2]	60mVp-p	40mVp-p	40mVp-p	80mVp-p
	10mVrms	6mVrms	8mVrms	15mVrms
Current Ripple	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
ine Regulation(Current)	200mA	30mA	30mA	30mA
/oltage Temperature Coefficient 🏾	100ppm/°C			
Current Temperature Coefficient	150ppm/°C			
OVM Resolution	0.1mV	0.1mV	0.1mV	1mV
VM Precision ¹¹	0.05%+15mV	0.05%+15mV	0.05%+15mV	0.1%+15mV
perating Mode	Constant voltage (CV) / Constant cu	urrent (CC)		
Remote Compensation	4V MAX	4V MAX	5V MAX	5V MAX
Aaster-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)
_oad Transient Recovery Time	≤2ms			
Command Response Time	50ms			
Series Capability ^{16]}	Up to 10 units			
Parallel Capability	Up to 10 units			
Current Sharing ¹⁷¹	12V	12V	20V	30V
Efficiency (full load)	91%	91%	91%	92%
		Other		
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBA	ACK		
Anti Reverse rrigation Protection	No(customers can purchase other accessorie: to achieve this function, please consult the salesrepresentative for details)		Yes	Yes
nput Fuse	40A, 125VAC/250VAC, fast-acting type			
Jnit 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. R\$232/R\$485/USB/LAN; 2. R\$232/R\$485/USB/LAN/GPIB			
Operating Environment): Pollution degree 2. Installation cate	aory II. Indoor use
Cooling Mode	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use. Forced air-cooling			
Altitude	2000m			
	200011			

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

4000W in 211(1)

(1) output of set, when output output

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<(lav*2.5% + 5% FS) A, F.S is the full scale of the current. lav=lsum/n, where lav is average current, lsum 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.

4000W in 2U(2)

Model	SP150VDC4000W	SP200VDC4000W	SP600VDC4000W	SP800VDC4000W	
		Input			
nput Voltage	190~265VAC				
nput Frequency	47~63Hz				
Power Factor	>0.98				
nput Power	4500VA(MAX)				
		Output			
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				
/oltage Load Regulation	15mV	25mV	30mV	200mV	
Current Load Regulation	30mA	24mA	10mA	20mA	
/oltage Display Resolution	1mV				
Current Display Resolution	0.1mA				
/oltage Programmable Resolution	3mV	4mV	12mV	24mV	
Current Programmable Resolution	1mA				
/oltage Setting Accuracy ¹¹	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	
/oltage Measurement Accuracy ¹¹	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	
/oltage Ripple ²	80mVp-p 15mVrms	150mVp-p 30mVrms	350mVp-p 40mVrms	800mVp-p 200mVrms	
Current Ripple	60mA (Full Range) 10mA (TYP Value)	50mA (Full Range) 20mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)	25mA (Full Range) 10mA (TYP Value)	
ine Regulation(Voltage)	0.02%+8mV	0.02%+8mV	0.01%+30mV	0.01%+40mV	
ine Regulation(Current)	30mA	30mA	15mA	20mA	
/oltage Temperature Coefficient ^[4]	100ppm/°C				
Current Temperature Coefficient	150ppm/°C				
VM Resolution	1mV	1mV	12mV	12mV	
VM Precision ¹¹	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV	
perating Mode	Constant voltage (CV) / Const	ant current (CC)			
Remote Compensation	5V MAX				
Aaster-slave Control	Yes				
esponse (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)	
oad Transient Recovery Time ^[5]	≤2.5ms	≤3ms	≤3ms	≤3ms	
Command Response Time	50ms				
Series Capability 16]	Up to 8 units	Up to 6 units	Up to 2 units	Not Recommended	
Parallel Capability	Up to 10 units				
Current Sharing ¹⁷¹	40V	50V	200V	250V	
Efficiency (full load)	93%	92%	92%	92%	
		Other	·		
Protection Function	OVP/OCP/OTP/OPP/SCP/FC	DLDBACK			
Anti Reverse rrigation Protection	Yes				
nput Fuse	40A, 125VAC/250VAC, fast-acting type				
Jnit 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. R\$232/R\$485/U\$B/LAN; 2. R\$232/R\$485/U\$B/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				

[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. 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.

1

[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<(lav*2.5% + 5% FS) A, F.S is the full scale of the current. lav=lsum/n, where lav is average current, lsum 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.

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