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***SP-3U/6U Series***  
***Wide-range High-power Programmable DC Power Supply***

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## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

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### Selection List:

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SP80VDC12000W	80V	400A	12000W	P01
SP80VDC18000W	80V	600A	18000W	P01
SP80VDC24000W	80V	800A	24000W	P03
SP80VDC30000W	80V	1000A	30000W	P03
SP80VDC36000W	80V	1200A	36000W	P03
SP165VDC12000W	165V	180A	12000W	P05
SP165VDC24000W	165V	360A	24000W	P05
SP165VDC36000W	165V	540A	36000W	P05
SP250VDC18000W	250V	180A	18000W	P07
SP360VDC6000W	360V	42.5A	6000W	P09
SP360VDC12000W	360V	85A	12000W	P09
SP360VDC18000W	360V	127.5A	18000W	P09
SP360VDC24000W	360V	170A	24000W	P11
SP360VDC30000W	360V	212.5A	30000W	P11
SP360VDC36000W	360V	255A	36000W	P11
SP500VDC6000W	500V	32A	6000W	P13
SP500VDC12000W	500V	64A	12000W	P13
SP500VDC18000W	500V	96A	18000W	P13
SP500VDC24000W	500V	128A	24000W	P15
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SP500VDC36000W	500V	192A	36000W	P15
SP750VDC6000W	750V	21A	6000W	P17
SP750VDC12000W	750V	42A	12000W	P17
SP750VDC18000W	750V	63A	18000W	P17
SP750VDC24000W	750V	84A	24000W	P19
SP750VDC30000W	750V	105A	30000W	P19
SP750VDC36000W	750V	126A	36000W	P19
SP1000VDC12000W	1000V	32A	12000W	P21
SP1000VDC24000W	1000V	64A	24000W	P21
SP1000VDC36000W	1000V	96A	36000W	P21
SP1500VDC12000W	1500V	21A	12000W	P13
SP1500VDC18000W	1500V	32A	18000W	P13
SP1500VDC24000W	1500V	42A	24000W	P25
SP1500VDC36000W	1500V	63A	36000W	P25
SP2250VDC18000W	2250V	21A	18000W	P27

# SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP80VDC6000W	SP80VDC12000W	SP80VDC18000W	
<b>Input</b>				
Voltage <sup>(1)</sup>	187~253VAC 340~460VAC			
Current <sup>(1)</sup>	3P208 L3-0, L1, L2-38A 3P400 L3-0, L1,L2-19A	3P208 L1-60A, L2,L3-38A 3P400 L1-30A, L2,L3-19A	3P208 L1,L2,L3-60A 3P400 L1,L2,L3-30A	
Frequency	45~65Hz			
Connection	2ph, PE	3ph, PE	3ph, PE	
Fuse (Internal) <sup>(1)</sup>	T50A*2pcs T30A*2pcs			
Power Factor	>0.99			
Input Power	3P208 7.1kVAmax, 3P400 6.9kVAmax	3P208 14.2kVAmax, 3P400 13.8kVAmax	3P208 21.3kVAmax, 3P400 20.7kVAmax	
Efficiency <sup>(1)</sup>	3P208 ~90.5%@80V, 3P208 ~86.5%@200A 3P400 ~92.2%@80V, 3P400 ~87.8%@200A	3P208 ~90.5%@80V, 3P208 ~86.5%@400A 3P400 ~92.2%@80V, 3P400 ~87.8%@400A	3P208 ~90.5%@80V, 3P208 ~86.5%@600A 3P400 ~92.2%@80V, 3P400 ~87.8%@600A	
<b>Output</b>				
Voltage Range	0~80V			
Current Range <sup>(2)</sup>	0~200A	0~400A	0~600A	
Power Range	0~6000W	0~12000W	0~18000W	
Max. Setup Range	Voltage	0~84V(0~105%)		
	Current	0~204.75A(0~102%)	0~409.5A(0~102%)	0~614.25A(0~102%)
	Power	0~6300W(0~105%)		
	Internal Resistance	0~12Ω	0~6Ω	0~4Ω
Accuracy	Voltage	<0.1% Umax(80mV)		
	Current	<0.2% Imax(400mA)	<0.2% Imax(800mA)	<0.2% Imax(1200mA)
	Power	<0.5%+30W	<0.5%+60W	<0.5%+90W
	Internal Resistance	R<2% Rmax, I<0.3% Imax		
Line Regulation	Voltage	<0.02% Umax(16mV)		
	Current	<0.05% Imax(100mA)	<0.05% Imax(200mA)	<0.05% Imax(300mA)
	Power	<0.05% Pmax		
Load Regulation <sup>(3)</sup>	Voltage	<0.05%Umax(40mV) @Rated Voltage, <0.1%Umax(80mV) @Rated Current		
	Current	<0.15% Imax(300mA)	<0.15% Imax(600mA)	<0.15% Imax(900mA)
	Power	<0.75% Pmax		
Rise Time	Voltage <15ms (No Load) <55ms (Full Load)			
Drop Time	Voltage <850ms (No Load) <15ms (Full Load)			
Transient Response Time <sup>(4)</sup>	Voltage ≤1.5ms/0.8V			
Display Resolution	Voltage	0.001V		
	Current	0.001A		
	Power	0.1W		
	Internal Resistance	0.0001Ω		
Measurement Accuracy	Voltage	<0.1% Umax(80mV)		
	Current	<0.2% Imax(400mA)	<0.2% Imax(800mA)	<0.2% Imax(1200mA)
	Power	<0.5% Pmax		
	Internal Resistance	<0.4% Rmax		
Ripple <sup>(5)</sup>	Voltage	<180mVpp, <15mVrms	<288mVpp, <23mVrms	<320mVpp, <25mVrms
	Current	<100mArms	<200mArms	<300mArms
Remote Compensation	Voltage	5%Umax(4V)		
<b>Sink Function</b>				
Input Voltage	0~80V			
Input Current	0~100A	0~200A	0~300A	
Input Power	0~335W	0~660W	0~1000W	
Min. Operating Voltage	3V@100A	3V@200A	3V@300A	
CC Resolution	10mA	20mA	30mA	

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP80VDC6000W	SP80VDC12000W	SP80VDC18000W
CC Accuracy	<0.2% I <sub>max</sub> (200mA)	<0.2% I <sub>max</sub> (400mA)	<0.2% I <sub>max</sub> (600mA)
CV Resolution	<4mV		
CV Accuracy	<0.1% U <sub>max</sub> (80mV)		
CP Resolution	0.5W	1W	1.5W
CP Accuracy	<0.5% P <sub>max</sub> (1675mW)	<0.5% P <sub>max</sub> (3300mW)	<0.5% P <sub>max</sub> (5000mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
<b>General</b>			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numeric keys, Rotary knob, USB port for transfer and upgrading firmware		
Rack Mount Handles	Yes		
FAN	Temperature control		
Protection	OCP, OVP, OPP, OTP, HARD FAIL		
Interface	RS232/RS485/USB(Standard), GPIB/LAN(Optional), CAN(Optional)		
Command Response Time	<3ms		
<b>Analog Interface(Optional)</b>			
Set Value Inputs	Analog input 0~5V/0~10V or 0~5kΩ/0~10kΩ to set 0~105% voltage, current and power		
Actual Value Output	Analog output 0~5V/0~10V to monitor the voltage and current.		
Accuracy U/I/P/R	<0.2% F.S		
Actual Output U/I	<0.2%		
Control Signals	DC ON/OFF, External control Enable/Disable		
Status Signals	CV, OVP, OT		
Sampling Rate of Input & Output	45Hz		
Galvanic Isolation to the Device	2121VDC		
<b>Master/Slave Control</b>			
Series Output	MAX 2 units		
Parallel Output	MAX 16 units		
<b>Environmental</b>			
Operating Temperature <sup>[1]</sup>	0~40°C		
Storage Temperature	-20~70°C		
Temperature Coefficient	100ppm/°C(voltage), 150ppm/°C(current)		
Relative Humidity	<95%RH(non-condensing)@35°C, <80%RH(non-condensing)@40°C		
Altitude	<2000m@40°C		
Fan Noise	45dB Idle; 71dB Max;	45dB Idle; 73dB Max;	45dB Idle; 75dB Max;
<b>Mechanical</b>			
Dimensions(WxHxD)	423.0x133.0x718.0 mm		
Package Dimensions(WxHxD)	665.0x347.0x1009.0 mm		
Unit Weight	27kg	38kg	50kg
Shipping Weight	37kg	48kg	60kg
<b>Miscellaneous</b>			
Over Voltage Category	II		
Protection Class	I		
Pollution Degree	2		
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2818VDC		

[1] For different input voltage standard option must be specified at the time of order as they are installed at the factory prior to shipment.

[2] It is recommended that the output current is derated by 10% when the operation environment is higher than 30°C.

[3] Load transient from 0% to 100% of rated output.

[4] Test value at 100% voltage and 100% power.

[5] V<sub>rms</sub> @ 300kHz, V<sub>pp</sub> @ 20MHz, A<sub>rms</sub> @ 300kHz.

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP80VDC24000W	SP80VDC30000W	SP80VDC36000W	
<b>Input</b>				
Voltage <sup>(1)</sup>	200~253VAC 340~460VAC			
Current <sup>(1)</sup>	3P208 L3-60A , L1, L2-103A 3P400 L3-30A, L1,L2-49A	3P208 L1-125A,L2,L3-103A 3P400 L1-63A,L2,L3-49A	3P208 L1,L2,L3-125A 3P400 L1,L2,L3-63A	
Frequency	45~65Hz			
Connection	3ph, PE			
Fuse (Internal) <sup>(1)</sup>	T50A*2pcs T30A*2pcs			
Power Factor	>0.99			
Input Power	3P208 28.4kVAmax, 3P400 27.6kVAmax	3P208 35.5kVAmax, 3P400 34.5kVAmax	3P208 42.6kVAmax, 3P400 41.4kVAmax	
Efficiency <sup>(1)</sup>	3P208 ~90.5%@80V, 3P208 ~86.5%@800A 3P400 ~92.2%@80V, 3P400 ~87.8%@800A	3P208 ~90.5%@80V, 3P208 ~86.5%@1000A 3P400 ~92.2%@80V, 3P400 ~87.8%@1000A	3P208 ~90.5%@80V, 3P208 ~86.5%@1200A 3P400 ~92.2%@80V, 3P400 ~87.8%@1200A	
<b>Output</b>				
Voltage Range	0~80V			
Current Range <sup>(2)</sup>	0~800A	0~1000A	0~1200A	
Power Range	0~24000W	0~30000W	0~36000W	
Max. Setup Range	Voltage	0~84V(0~105%)		
	Current	0~819A(0~102%)	0~1023.75A(0~102%)	0~1228.5A(0~102%)
	Power	0~26400W(0~105%)		
	Internal Resistance	0~3.0Ω	0~2.4Ω	0~2.0Ω
Accuracy	Voltage	<0.1% Umax(80mV)		
	Current	<0.2% I <sub>max</sub> (1600mA)	<0.2% I <sub>max</sub> (2000mA)	<0.2% I <sub>max</sub> (2400mA)
	Power	<1%+120W	<1%+150W	<1%+180W
	Internal Resistance	R<2% R <sub>max</sub> , I<0.3% I <sub>max</sub>		
Line Regulation	Voltage	<0.02% Umax(16mV)		
	Current	<0.05% I <sub>max</sub> (400mA)	<0.05% I <sub>max</sub> (500mA)	<0.05% I <sub>max</sub> (600mA)
	Power	<0.05% P <sub>max</sub>		
Load Regulation <sup>(3)</sup>	Voltage	<0.05%U <sub>max</sub> (40mV) @Rated Voltage, <0.1%U <sub>max</sub> (80mV) @Rated Current		
	Current	<0.15% I <sub>max</sub> (1200mA)	<0.15% I <sub>max</sub> (1500mA)	<0.15% I <sub>max</sub> (1800mA)
	Power	<0.75% P <sub>max</sub>		
Rise Time	Voltage	<15ms (No Load) <30ms (Full Load)		
Drop Time	Voltage	<850ms (No Load) <15ms (Full Load)		
Transient Response Time <sup>(4)</sup>	Voltage	≤1.5ms/0.8V		
Display Resolution	Voltage	0.001V		
	Current	0.001A	0.01A	0.01A
	Power	0.1W		
	Internal Resistance	0.0001Ω		
Measurement Accuracy	Voltage	<0.1% U <sub>max</sub> (80mV)		
	Current	<0.2% I <sub>max</sub> (1600mA)	<0.2% I <sub>max</sub> (2000mA)	<0.2% I <sub>max</sub> (2400mA)
	Power	<0.5% P <sub>max</sub>		
	Internal Resistance	<0.4% R <sub>max</sub>		
Ripple <sup>(5)</sup>	Voltage	<320mV <sub>pp</sub> , <25mV <sub>rms</sub>		
	Current	<360mArms	<450mArms	<540mArms
Remote Compensation	Voltage	5% U <sub>max</sub> (4V)		
<b>Sink Function</b>				
Input Voltage	0~80V			
Input Current	0~400A	0~500A	0~600A	
Input Power	0~1300W	0~1600W	0~2000W	
Min. Operating Voltage	3V@400A	3V@500A	3V@600A	
CC Resolution	40mA	50mA	60mA	

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP80VDC24000W	SP80VDC30000W	SP80VDC36000W
CC Accuracy	<0.2% I <sub>max</sub> (800mA)	<0.2% I <sub>max</sub> (1000mA)	<0.2% I <sub>max</sub> (1200mA)
CV Resolution	<4mV		
CV Accuracy	<0.1% U <sub>max</sub> (80mV)		
CP Resolution	2W	2.5W	3W
CP Accuracy	<0.5% P <sub>max</sub> (6500mW)	<0.5% P <sub>max</sub> (8000mW)	<0.5% P <sub>max</sub> (10000mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
<b>General</b>			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numeric keys, Rotary knob, USB port for transfer and upgrading firmware		
Rack Mount Handles	Yes		
FAN	Temperature control		
Protection	OCP, OVP, OPP, OTP, HARD FAIL		
Interface	RS232/RS485/USB(Standard), GPIB/LAN(Optional), CAN(Optional)		
Command Response Time	<3ms		
<b>Analog Interface(Optional)</b>			
Set Value Inputs	Analog input 0~5V/0~10V or 0~5kΩ/0~10kΩ to set 0~105% voltage, current and power		
Actual Value Output	Analog output 0~5V/0~10V to monitor the voltage and current.		
Accuracy U/I/P/R	<0.2% F.S		
Actual Output U/I	<0.2%		
Control Signals	DC ON/OFF, External control Enable/Disable		
Status Signals	CV, OVP, OT		
Sampling Rate of Input & Output	45Hz		
Galvanic Isolation to the Device	2121VDC		
<b>Master/Slave Control</b>			
Series Output	MAX 2 units		
Parallel Output	MAX 16 units		
<b>Environmental</b>			
Operating Temperature <sup>[1]</sup>	0~40°C		
Storage Temperature	-20~70°C		
Temperature Coefficient	100ppm/°C(voltage), 150ppm/°C(current)		
Relative Humidity	<95%RH(non-condensing)@35°C, <80%RH(non-condensing)@40°C		
Altitude	<2000m@40°C		
Fan Noise	48dB Idle; 77dB Max;	48dB Idle; 80dB Max;	48dB Idle; 82dB Max;
<b>Mechanical</b>			
Dimensions(WxHxD)	423.0x265.0x745.0 mm		
Package Dimensions(WxHxD)	549.0x531.0x946.0 mm		
Unit Weight	75kg	86kg	97kg
Shipping Weight	101kg	112kg	123kg
<b>Miscellaneous</b>			
Over Voltage Category	II		
Protection Class	I		
Pollution Degree	2		
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2818VDC		

[1] For different input voltage standard option must be specified at the time of order as they are installed at the factory prior to shipment.

[2] It is recommended that the output current is derated by 10% when the operation environment is higher than 30°C.

[3] Load transient from 0% to 100% of rated output.

[4] Test value at 100% voltage and 100% power.

[5] V<sub>rms</sub> @ 300kHz, V<sub>pp</sub> @ 20MHz, A<sub>rms</sub> @ 300kHz.

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP165VDC12000W	SP165VDC24000W	SP165VDC36000W	
<b>Input</b>				
Voltage <sup>[1]</sup>	187~253VAC 340~460VAC	200~253VAC	200~253VAC	
Current <sup>[1]</sup>	3P208 L1-60A, L2,L3-38A	3P208 L3-60A,L1,L2-103A	3P208 L1,L2,L3-125A	
	3P400 L1-30A, L2,L3-19A	3P400 L3-30A,L1,L2-49A	3P400 L1,L2,L3-63A	
Frequency	45~65Hz			
Connection	3ph, PE			
Fuse (Internal) <sup>[1]</sup>	T50A*2pcs			
	T30A*2pcs			
Power Factor	>0.99			
Input Power	3P208 14.4kVAmax, 3P400 14.0kVAmax	3P208 28.8kVAmax, 3P400 28.0kVAmax	3P208 42.6kVAmax, 3P400 41.4kVAmax	
Efficiency <sup>[1]</sup>	3P208 ~90.5%@165V, 3P208 ~85%@180A	3P208 ~90.5%@165V, 3P208 ~85%@360A	3P208 ~90.5%@165V, 3P208 ~85%@540A	
	3P400 ~91.5%@165V, 3P400 ~85.5%@180A	3P400 ~91.5%@165V, 3P400 ~85.5%@360A	3P400 ~91.5%@165V, 3P400 ~85.5%@540A	
<b>Output</b>				
Voltage Range	0~165V			
Current Range <sup>[2]</sup>	0~180A	0~360A	0~540A	
Power Range	0~12000W	0~24000W	0~36000W	
Max. Setup Range	Voltage	0~173.25V(0~105%)		
	Current	0~189A(0~105%)	0~378A(0~105%)	0~567A(0~105%)
	Power	0~12600W(0~105%)		
	Internal Resistance	0~27.5Ω	0~13.75Ω	0~9.167Ω
Accuracy	Voltage	<0.1% Umax(165mV)		
	Current	<0.2% I <sub>max</sub> (360mA)	<0.2% I <sub>max</sub> (720mA)	<0.2% I <sub>max</sub> (1080mA)
	Power	<0.5%+60W	<1%+120W	<1%+180W
	Internal Resistance	R<2% R <sub>max</sub> , I<0.3% I <sub>max</sub>		
Line Regulation	Voltage	<0.02% Umax(33mV)		
	Current	<0.05% I <sub>max</sub> (90mA)	<0.05% I <sub>max</sub> (180mA)	<0.05% I <sub>max</sub> (270mA)
	Power	<0.05% P <sub>max</sub>		
Load Regulation <sup>[3]</sup>	Voltage	<0.05% Umax(82.5mV) @Rated Voltage, <0.1% Umax(165mV) @Rated Current		
	Current	<0.15% I <sub>max</sub> (270mA)	<0.15% I <sub>max</sub> (540mA)	<0.15% I <sub>max</sub> (810mA)
	Power	<0.75% P <sub>max</sub>		
Rise Time	Voltage	<15ms (No Load) <30ms (Full Load)		
Drop Time	Voltage	<900ms (No Load) <15ms (Full Load)		
Transient Response Time <sup>[4]</sup>	Voltage	≤1.5ms/1.65V		
Display Resolution	Voltage	0.001V		
	Current	0.001A		
	Power	0.1W		
	Internal Resistance	0.0001Ω		
Measurement Accuracy	Voltage	<0.1% Umax(165mV)		
	Current	<0.2% I <sub>max</sub> (360mA)	<0.2% I <sub>max</sub> (720mA)	<0.2% I <sub>max</sub> (1080mA)
	Power	<0.5% P <sub>max</sub>		
	Internal Resistance	<0.4% R <sub>max</sub>		
Ripple <sup>[5]</sup>	Voltage	<540mV <sub>pp</sub> , <50mV <sub>rms</sub>		
	Current	<100mArms	<200mArms	<300mArms
Remote Compensation	Voltage	2%Umax(3.3V)		
<b>General</b>				
Graphic Display	4.3" Color touch LCD			
Operation Key Feature	Soft keys, Numeric keys, Rotary knob, USB port for transfer and upgrading firmware			
Rack Mount Handles	Yes			
FAN	Temperature control			
Protection	OCP, OVP, OPP, OTP, HARD FAIL			



## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP165VDC12000W	SP165VDC24000W	SP165VDC36000W
Interface	RS232/RS485/USB(Standard), GPIB/LAN(Optional), CAN(Optional)		
Command Response Time	<3ms		
<b>Analog Interface(Optional)</b>			
Set Value Inputs	Analog input 0~5V/0~10V or 0~5kΩ/0~10kΩ to set 0~105% voltage, current and power		
Actual Value Output	Analog output 0~5V/0~10V to monitor the voltage and current.		
Accuracy U/I/P/R	<0.2% F.S		
Actual Output U/I	<0.2%		
Control Signals	DC ON/OFF, External control Enable/Disable		
Status Signals	CV, OVP, OT		
Sampling Rate of Input & Output	45Hz		
Galvanic Isolation to the Device	2121VDC		
<b>Master/Slave Control</b>			
Series Output	MAX 2 units		
Parallel Output	MAX 16 units		
<b>Environmental</b>			
Operating Temperature <sup>[2]</sup>	0~40°C		
Storage Temperature	-20~70°C		
Temperature Coefficient	100ppm/°C(voltage), 150ppm/°C(current)		
Relative Humidity	<95%RH(non-condensing)@35°C, <80%RH(non-condensing)@40°C		
Altitude	<2000m@40°C		
Fan Noise	45dB Idle; 73dB Max;	48dB Idle; 80dB Max;	48dB Idle; 82dB Max;
<b>Mechanical</b>			
Dimensions(WxHxD)	423.0x133.0x718.0 mm	423.0x265.0x745.0 mm	423.0x265.0x745.0 mm
Package Dimensions(WxHxD)	665.0x347.0x1009.0 mm	549.0x531.0x946.0 mm	549.0x531.0x946.0 mm
Unit Weight	38kg	75kg	97kg
Shipping Weight	48kg	101kg	123kg
<b>Miscellaneous</b>			
Over Voltage Category	II		
Protection Class	I		
Pollution Degree	2		
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2818VDC		

[1] For different input voltage standard option must be specified at the time of order as they are installed at the factory prior to shipment.

[2] It is recommended that the output current is derated by 10% when the operation environment is higher than 30°C.

[3] Load transient from 0% to 100% of rated output.

[4] Test value at 100% voltage and 100% power.

[5] Vrms @ 300kHz, Vpp @ 20MHz, Arms @ 300kHz.

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL		SP250VDC18000W
<b>Input</b>		
Voltage <sup>[1]</sup>		190~253VAC
		340~460VAC
Current <sup>[1]</sup>		3P208 L1,L2,L3-60A
		3P400 L1,L2,L3-30A
Frequency		45~65Hz
Connection		3ph, PE
Fuse (Internal) <sup>[1]</sup>		T50A*2pcs
		T30A*2pcs
Power Factor		>0.99
Input Power		3P208 21.5KVAmx, 3P400 20.9KVAmx
Efficiency <sup>[1]</sup>		3P208 ~90.5%@250V, 3P208 ~85%@180A
		3P400 ~91.5%@250V, 3P400 ~85.5%@180A
<b>Output</b>		
Voltage Range		0~250V
Current Range <sup>[2]</sup>		0~180A
Power Range		0~18000W
Max. Setup Range	Voltage	0~262.5V(0~105%)
	Current	0~189A(0~105%)
	Power	0~18900W(0~105%)
	Internal Resistance	0~41.6667Ω
Accuracy	Voltage	<0.1% Umax(250mV)
	Current	<0.2% Imax(360mA)
	Power	<0.5%+90W
	Internal Resistance	R<2% Rmax, I<0.3% Imax
Line Regulation	Voltage	<0.02% Umax(50mV)
	Current	<0.05% Imax(90mA)
	Power	<0.05% Pmax
Load Regulation <sup>[3]</sup>	Voltage	<0.05% Umax(125mV) @Rated Voltage, <0.1% Umax(250mV) @Rated Current
	Current	<0.15% Imax(270mA)
	Power	<0.75% Pmax
Rise Time	Voltage	<15ms (No Load) <30ms (Full Load)
Drop Time	Voltage	<950ms (No Load) <15ms (Full Load)
Transient Response Time <sup>[4]</sup>	Voltage	≤1.5ms/2.5V
Display Resolution	Voltage	0.001V
	Current	0.001A
	Power	0.1W
	Internal Resistance	0.0001Ω
Measurement Accuracy	Voltage	<0.1% Umax(250mV)
	Current	<0.2% Imax(360mA)
	Power	<0.5% Pmax
	Internal Resistance	<0.4% Rmax
Ripple <sup>[5]</sup>	Voltage	<850mVpp, <75mVrms
	Current	<100mArms
Remote Compensation	Voltage	1%Umax(2.5V)
<b>General</b>		
Graphic Display		4.3" Color touch LCD
Operation Key Feature		Soft keys, Numeric keys, Rotary knob, USB port for transfer and upgrading firmware
Rack Mount Handles		Yes
FAN		Temperature control
Protection		OCP, OVP, OPP, OTP, HARD FAIL

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP250VDC18000W
Interface	RS232/RS485/USB(Standard), GPIB/LAN(Optional), CAN(Optional)
Command Response Time	<3ms
Analog Interface(Optional)	
Set Value Inputs	Analog input 0~5V/0~10V or 0~5kΩ/0~10kΩ to set 0~105% voltage, current and power
Actual Value Output	Analog output 0~5V/0~10V to monitor the voltage and current.
Accuracy U/I/P/R	<0.2% F.S
Actual Output U/I	<0.2%
Control Signals	DC ON/OFF, External control Enable/Disable
Status Signals	CV, OVP, OT
Sampling Rate of Input & Output	45Hz
Galvanic Isolation to the Device	2121VDC
Master/Slave Control	
Series Output	MAX 2 units
Parallel Output	MAX 16 units
Environmental	
Operating Temperature <sup>[2]</sup>	0~40°C
Storage Temperature	-20~70°C
Temperature Coefficient	100ppm/°C(voltage), 150ppm/°C(current)
Relative Humidity	<95%RH(non-condensing)@35°C, <80%RH(non-condensing)@40°C
Altitude	<2000m@40°C
Fan Noise	45dB Idle; 75dB Max;
Mechanical	
Dimensions(WxHxD)	423.0x133.0x718.0 mm
Package Dimensions(WxHxD)	665.0x347.0x1009.0 mm
Unit Weight	50kg
Shipping Weight	60kg
Miscellaneous	
Over Voltage Category	II
Protection Class	I
Pollution Degree	2
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2818VDC

[1] For different input voltage standard option must be specified at the time of order as they are installed at the factory prior to shipment.

[2] It is recommended that the output current is derated by 10% when the operation environment is higher than 30°C.

[3] Load transient from 0% to 100% of rated output.

[4] Test value at 100% voltage and 100% power.

[5] Vrms @ 300kHz, Vpp @ 20MHz, Arms @ 300kHz.

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP360VDC6000W	SP360VDC12000W	SP360VDC18000W	
<b>Input</b>				
Voltage <sup>(1)</sup>	187~253VAC 340~460VAC			
Current <sup>(1)</sup>	3P208 L3-0, L1,L2-38A 3P400 L3-0, L1,L2-19A	3P208 L1-60A, L2,L3-38A 3P400 L1-30A, L2,L3-19A	3P208 L1,L2,L3-60A 3P400 L1,L2,L3-30A	
Frequency	45~65Hz			
Connection	2ph, PE	3ph, PE	3ph, PE	
Fuse (Internal) <sup>(1)</sup>	T50A*2pcs T30A*2pcs			
Power Factor	>0.99			
Input Power	3P208 6.7kVAmax, 3P400 6.5kVAmax	3P208 13.4kVAmax, 3P400 13.0kVAmax	3P208 20.1kVAmax, 3P400 19.5kVAmax	
Efficiency <sup>(1)</sup>	3P208 ~92.2%@360V, 3P208 ~90.5%@42.5A 3P400 ~92.5%@360V, 3P400 ~91%@42.5A	3P208 ~92.5%@360V, 3P208 ~90.5%@85A 3P400 ~92.5%@360V, 3P400 ~91%@85A	3P208 ~92.5%@360V, 3P208 ~90.5%@127.5A 3P400 ~92.5%@360V, 3P400 ~91%@127.5A	
<b>Output</b>				
Voltage Range	0~360V			
Current Range	0~42.5A	0~85A	0~127.5A	
Power Range	0~6000W	0~12000W	0~18000W	
Max. Setup Range	Voltage	0~378V(0~105%)		
	Current	0~44.63A(0~105%)	0~89.25A(0~105%)	0~133.88A(0~105%)
	Power	0~6300W(0~105%)		0~18900W(0~105%)
	Internal Resistance	0~440Ω	0~220Ω	0~147Ω
Accuracy	Voltage	<0.1%Umax(360mV)		
	Current	<0.2%Imax(85mA)	<0.2%Imax(170mA)	<0.2%Imax(255mA)
	Power	<1%+60W		<1%+120W
	Internal Resistance	R<2% Rmax, I<0.3% Imax		
Line Regulation	Voltage	<0.02% Umax(72mV)		
	Current	<0.05% Imax(22mA)	<0.05% Imax(43mA)	<0.05% Imax(64mA)
	Power	<0.05% Pmax		
Load Regulation <sup>(2)</sup>	Voltage	<0.05% Umax(180mV) @Rated Voltage, <0.1% Umax(360mV) @Rated Current		
	Current	<0.15% Imax(64mA)	<0.15% Imax(128mA)	<0.15% Imax(191mA)
	Power	<0.75% Pmax		
Rise Time	Voltage	<15ms (No Load) <80ms (Full Load)		
Drop Time	Voltage	<800ms (No Load) <15ms (Full Load)		
Transient Response Time <sup>(3)</sup>	Voltage	≤1.5ms/3.6V		
Display Resolution	Voltage	0.01V		
	Current	0.001A		
	Power	1W		
	Internal Resistance	0.001Ω		
Measurement Accuracy	Voltage	<0.1% Umax(360mV)		
	Current	<0.2% Imax(85mA)	<0.2% Imax(170mA)	<0.2% Imax(255mA)
	Power	<0.5% Pmax		
	Internal Resistance	<0.4% Rmax		
Ripple <sup>(4)</sup>	Voltage	<320mVpp, <55mVrms		
	Current	<21mArms	<43mArms	<64mArms
Remote Compensation	Voltage	3%Umax(10.8V)		
<b>Sink Function</b>				
Input Voltage	0~360V			
Input Current	0~25A	0~50A	0~75A	
Input Power	0~325W	0~650W	0~975W	
Min. Operating Voltage	8V@16A	8V@24A	8V@40A	
CC Resolution	2mA	4mA	6mA	

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP360VDC6000W	SP360VDC12000W	SP360VDC18000W
CC Accuracy	<0.2% I <sub>max</sub> (50mA)	<0.2% I <sub>max</sub> (100mA)	<0.2% I <sub>max</sub> (150mA)
CV Resolution	<20mV		
CV Accuracy	<0.1% U <sub>max</sub> (360mV)		
CP Resolution	0.5W	1.0W	1.5W
CP Accuracy	<0.5% P <sub>max</sub> (1625mW)	<0.5% P <sub>max</sub> (3250mW)	<0.5% P <sub>max</sub> (4875mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
<b>General</b>			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numeric keys, Rotary knob, USB port for transfer and upgrading firmware		
Rack Mount Handles	Yes		
FAN	Temperature control		
Protection	OCP, OVP, OPP, OTP, HARD FAIL		
Interface	RS232/RS485/USB(Standard), GPIB/LAN(Optional), CAN(Optional)		
Command Response Time	<3ms		
<b>Analog Interface(Optional)</b>			
Set Value Inputs	Analog input 0~5V/0~10V or 0~5kΩ/0~10kΩ to set 0~105% voltage, current and power		
Actual Value Output	Analog output 0~5V/0~10V to monitor the voltage and current.		
Accuracy U/I/P/R	<0.2% F.S		
Actual Output U/I	<0.2%		
Control Signals	DC ON/OFF, External control Enable/Disable		
Status Signals	CV, OVP, OT		
Sampling Rate of Input & Output	45Hz		
Galvanic Isolation to the Device	2818VDC		
<b>Master/Slave Control</b>			
Series Output	MAX 2 units		
Parallel Output	MAX 16 units		
<b>Environmental</b>			
Operating Temperature	0~40°C		
Storage Temperature	-20~70°C		
Temperature Coefficient	100ppm/°C(voltage), 150ppm/°C(current)		
Relative Humidity	<95%RH(non-condensing)@35°C, <80%RH(non-condensing)@40°C		
Altitude	<2000m@40°C		
Fan Noise	45dB Idle; 71dB Max;	45dB Idle; 73dB Max;	45dB Idle; 75dB Max;
<b>Mechanical</b>			
Dimensions(WxHxD)	423.0x133.0x718.0 mm		
Package Dimensions(WxHxD)	665.0x347.0x1009.0 mm		
Unit Weight	27kg	38kg	50kg
Shipping Weight	37kg	48kg	60kg
<b>Miscellaneous</b>			
Over Voltage Category	II		
Protection Class	I		
Pollution Degree	2		
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2818VDC		

[1] For different input voltage standard option must be specified at the time of order as they are installed at the factory prior to shipment.

[2] Load transient from 0% to 100% of rated output.

[3] Test value at 100% voltage and 100% power.

[4] V<sub>rms</sub> @ 300kHz, V<sub>pp</sub> @ 20MHz, Arms @ 300kHz.

# SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP360VDC24000W	SP360VDC30000W	SP360VDC36000W	
<b>Input</b>				
Voltage <sup>(1)</sup>	200~253VAC 340~460VAC			
Current <sup>(1)</sup>	3P208 L3-60A , L1, L2-103A 3P400 L3-30A, L1,L2-49A	3P208 L1-125A,L2,L3-103A 3P400 L1-63A,L2,L3-49A	3P208 L1,L2,L3-125A 3P400 L1,L2,L3-63A	
Frequency	45~65Hz			
Connection	3ph, PE			
Fuse (Internal) <sup>(1)</sup>	T50A*2pcs T30A*2pcs			
Power Factor	>0.99			
Input Power	3P208 26.8kVAmax, 3P400 26.0kVAmax	3P208 33.5kVAmax, 3P400 32.5kVAmax	3P208 40.2kVAmax, 3P400 39.0kVAmax	
Efficiency <sup>(1)</sup>	3P208 ~92.2%@360V, 3P208 ~90.5%@170A 3P400 ~92.5%@360V, 3P400 ~91%@170A	3P208 ~92.2%@360V, 3P208 ~90.5%@212.5A 3P400 ~92.5%@360V, 3P400 ~91%@212.5A	3P208 ~92.2%@360V, 3P208 ~90.5%@255A 3P400 ~92.5%@360V, 3P400 ~91%@255A	
<b>Output</b>				
Voltage Range	0~360V			
Current Range	0~170A	0~212.5A	0~255A	
Power Range	0~24000W	0~30000W	0~36000W	
Max. Setup Range	Voltage	0~378V(0~105%)		
	Current	0~178.5A(0~105%)	0~223.13A(0~105%)	0~267.75A(0~105%)
	Power	0~26400W(0~105%)		
	Internal Resistance	0~64Ω	0~51Ω	0~43Ω
Accuracy	Voltage	<0.1%Umax(360mV)		
	Current	<0.2%Imax(340mA)	<0.2%Imax(425mA)	<0.2%Imax(510mA)
	Power	<1%+180W		
	Internal Resistance	R<2% Rmax, I<0.3% Imax		
Line Regulation	Voltage	<0.02% Umax(72mV)		
	Current	<0.05% Imax(85mA)	<0.05% Imax(106mA)	<0.05% Imax(128mA)
	Power	<0.05% Pmax		
Load Regulation <sup>(2)</sup>	Voltage	<0.05% Umax(180mV) @Rated Voltage, <0.1% Umax(360mV) @Rated Current		
	Current	<0.15% Imax(255mA)	<0.15% Imax(319mA)	<0.15% Imax(383mA)
	Power	<0.75% Pmax		
Rise Time	Voltage	<15ms (No Load) <80ms (Full Load)		
Drop Time	Voltage	<800ms (No Load) <15ms (Full Load)		
Transient Response Time <sup>(3)</sup>	Voltage	≤1.5ms/3.6V		
Display Resolution	Voltage	0.01V		
	Current	0.001A		
	Power	1W		
	Internal Resistance	0.001Ω		
Measurement Accuracy	Voltage	<0.1% Umax(360mV)		
	Current	<0.2% Imax(340mA)	<0.2% Imax(425mA)	<0.2% Imax(510mA)
	Power	<0.5% Pmax		
	Internal Resistance	<0.4% Rmax		
Ripple <sup>(4)</sup>	Voltage	<350mVpp, <60mVrms		
	Current	<85mArms	<106mArms	<128mArms
Remote Compensation	Voltage	3%Umax(10.8V)		
<b>Sink Function</b>				
Input Voltage	0~360V			
Input Current	0~100A	0~125A	0~150A	
Input Power	0~1300W	0~1625W	0~1950W	
Min. Operating Voltage	8V@56A	8V@64A	8V@80A	
CC Resolution	8mA	10mA	12mA	

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP360VDC24000W	SP360VDC30000W	SP360VDC36000W
CC Accuracy	<0.2% I <sub>max</sub> (200mA)	<0.2% I <sub>max</sub> (250mA)	<0.2% I <sub>max</sub> (300mA)
CV Resolution	<20mV		
CV Accuracy	<0.1% U <sub>max</sub> (360mV)		
CP Resolution	2W	2.5W	3W
CP Accuracy	<0.5% P <sub>max</sub> (6500mW)	<0.5% P <sub>max</sub> (8125mW)	<0.5% P <sub>max</sub> (9750mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
<b>General</b>			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numeric keys, Rotary knob, USB port for transfer and upgrading firmware		
Rack Mount Handles	Yes		
FAN	Temperature control		
Protection	OCP, OVP, OPP, OTP, HARD FAIL		
Interface	RS232/RS485/USB(Standard), GPIB/LAN(Optional), CAN(Optional)		
Command Response Time	<3ms		
<b>Analog Interface(Optional)</b>			
Set Value Inputs	Analog input 0~5V/0~10V or 0~5kΩ/0~10kΩ to set 0~105% voltage, current and power		
Actual Value Output	Analog output 0~5V/0~10V to monitor the voltage and current.		
Accuracy U/I/P/R	<0.2% F.S		
Actual Output U/I	<0.2%		
Control Signals	DC ON/OFF, External control Enable/Disable		
Status Signals	CV, OVP, OT		
Sampling Rate of Input & Output	45Hz		
Galvanic Isolation to the Device	2818VDC		
<b>Master/Slave Control</b>			
Series Output	MAX 2 units		
Parallel Output	MAX 16 units		
<b>Environmental</b>			
Operating Temperature	0~40°C		
Storage Temperature	-20~70°C		
Temperature Coefficient	100ppm/°C(voltage), 150ppm/°C(current)		
Relative Humidity	<95%RH(non-condensing)@35°C, <80%RH(non-condensing)@40°C		
Altitude	<2000m@40°C		
Fan Noise	48dB Idle; 77dB Max;	48dB Idle; 80dB Max;	48dB Idle; 82dB Max;
<b>Mechanical</b>			
Dimensions(WxHxD)	423.0x265.0x745.0 mm		
Package Dimensions(WxHxD)	549.0x531.0x946.0 mm		
Unit Weight	75kg	86kg	97kg
Shipping Weight	101kg	112kg	123kg
<b>Miscellaneous</b>			
Over Voltage Category	II		
Protection Class	I		
Pollution Degree	2		
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2818VDC		

[1] For different input voltage standard option must be specified at the time of order as they are installed at the factory prior to shipment.

[2] Load transient from 0% to 100% of rated output.

[3] Test value at 100% voltage and 100% power.

[4] V<sub>rms</sub> @ 300kHz, V<sub>pp</sub> @ 20MHz, Arms @ 300kHz.

# SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP500VDC6000W	SP500VDC12000W	SP500VDC18000W	
<b>Input</b>				
Voltage <sup>(1)</sup>	187~253VAC 340~460VAC			
Current <sup>(1)</sup>	3P208 L3-0, L1,L2-38A 3P400 L3-0, L1,L2-19A	3P208 L1-60A, L2,L3-38A 3P400 L1-30A, L2,L3-19A	3P208 L1,L2,L3-60A 3P400 L1,L2,L3-30A	
Frequency	45~65Hz			
Connection	2ph, PE	3ph, PE	3ph, PE	
Fuse (Internal) <sup>(1)</sup>	T50A*2pcs T30A*2pcs			
Power Factor	>0.99			
Input Power	3P208 6.7kVAmax, 3P400 6.5kVAmax	3P208 13.4kVAmax, 3P400 13.0kVAmax	3P208 20.1kVAmax, 3P400 19.5kVAmax	
Efficiency <sup>(1)</sup>	3P208 ~92.5%@500V, 3P208 ~91%@32A 3P400 ~94%@500V, 3P400 ~92.5%@32A	3P208 ~92.5%@500V, 3P208 ~91%@64A 3P400 ~94%@500V, 3P400 ~92.5%@64A	3P208 ~92.5%@500V, 3P208 ~91%@96A 3P400 ~94%@500V, 3P400 ~92.5%@96A	
<b>Output</b>				
Voltage Range	0~500V			
Current Range	0~32A	0~64A	0~96A	
Power Range	0~6000W	0~12000W	0~18000W	
Max. Setup Range	Voltage	0~525V(0~105%)		
	Current	0~33.6A(0~105%)	0~67.2A(0~105%)	0~100.8A(0~105%)
	Power	0~6300W(0~105%)		
	Internal Resistance	0~469Ω	0~235Ω	0~157Ω
Accuracy	Voltage	<0.1% Umax(500mV)		
	Current	<0.2% I <sub>max</sub> (64mA)	<0.2% I <sub>max</sub> (128mA)	<0.2% I <sub>max</sub> (192mA)
	Power	<1%+60W		
	Internal Resistance	R<2% R <sub>max</sub> , I<0.3% I <sub>max</sub>		
Line Regulation	Voltage	<0.02% Umax(100mV)		
	Current	<0.05% I <sub>max</sub> (16mA)	<0.05% I <sub>max</sub> (32mA)	<0.05% I <sub>max</sub> (48mA)
	Power	<0.05% P <sub>max</sub>		
Load Regulation <sup>(2)</sup>	Voltage	<0.05% Umax(250mV) @Rated Voltage, <0.1% Umax(500mV) @Rated Current		
	Current	<0.15% I <sub>max</sub> (48mA)	<0.15% I <sub>max</sub> (96mA)	<0.15% I <sub>max</sub> (144mA)
	Power	<0.75% P <sub>max</sub>		
Rise Time	Voltage <15ms (No Load) <80ms (Full Load)			
Drop Time	Voltage <1500ms (No Load) <15ms (Full Load)			
Transient Response Time <sup>(3)</sup>	Voltage ≤1.5ms/5V			
Display Resolution	Voltage	0.01V		
	Current	0.001A		
	Power	1W		
	Internal Resistance	0.001Ω		
Measurement Accuracy	Voltage	<0.1% Umax(500mV)		
	Current	<0.2% I <sub>max</sub> (64mA)	<0.2% I <sub>max</sub> (128mA)	<0.2% I <sub>max</sub> (192mA)
	Power	<0.5% P <sub>max</sub>		
	Internal Resistance	<0.4% R <sub>max</sub>		
Ripple <sup>(4)</sup>	Voltage	<600mVpp, <150mVrms	<650mVpp, <160mVrms	<650mVpp, <160mVrms
	Current	<16mArms	<32mArms	<48mArms
Remote Compensation	Voltage	3%Umax(15V)		
<b>Sink Function</b>				
Input Voltage	0~500V			
Input Current	0~16A	0~24A	0~40A	
Input Power	0~325W	0~650W	0~975W	
Min. Operating Voltage	8V@16A	8V@24A	8V@40A	
CC Resolution	1mA	2mA	3mA	



## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP500VDC6000W	SP500VDC12000W	SP500VDC18000W
CC Accuracy	<0.2% I <sub>max</sub> (32mA)	<0.2% I <sub>max</sub> (48mA)	<0.2% I <sub>max</sub> (80mA)
CV Resolution	<4mV		
CV Accuracy	<0.1% U <sub>max</sub> (500mV)		
CP Resolution	0.5W	1.0W	1.5W
CP Accuracy	<0.5% P <sub>max</sub> (1625mW)	<0.5% P <sub>max</sub> (3250mW)	<0.5% P <sub>max</sub> (4875mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
<b>General</b>			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numeric keys, Rotary knob, USB port for transfer and upgrading firmware		
Rack Mount Handles	Yes		
FAN	Temperature control		
Protection	OCP, OVP, OPP, OTP, HARD FAIL		
Interface	RS232/RS485/USB(Standard), GPIB/LAN(Optional), CAN(Optional)		
Command Response Time	<3ms		
<b>Analog Interface(Optional)</b>			
Set Value Inputs	Analog input 0~5V/0~10V or 0~5kΩ/0~10kΩ to set 0~105% voltage, current and power		
Actual Value Output	Analog output 0~5V/0~10V to monitor the voltage and current.		
Accuracy U/I/P/R	<0.2% F.S		
Actual Output U/I	<0.2%		
Control Signals	DC ON/OFF, External control Enable/Disable		
Status Signals	CV, OVP, OT		
Sampling Rate of Input & Output	45Hz		
Galvanic Isolation to the Device	2818VDC		
<b>Master/Slave Control</b>			
Series Output	MAX 2 units		
Parallel Output	MAX 16 units		
<b>Environmental</b>			
Operating Temperature	0~40°C		
Storage Temperature	-20~70°C		
Temperature Coefficient	100ppm/°C(voltage), 150ppm/°C(current)		
Relative Humidity	<95%RH(non-condensing)@35°C, <80%RH(non-condensing)@40°C		
Altitude	<2000m@40°C		
Fan Noise	45dB Idle; 71dB Max;	45dB Idle; 73dB Max;	45dB Idle; 75dB Max;
<b>Mechanical</b>			
Dimensions(WxHxD)	423.0x133.0x718.0 mm		
Package Dimensions(WxHxD)	665.0x347.0x1009.0 mm		
Unit Weight	27kg	38kg	50kg
Shipping Weight	37kg	48kg	60kg
<b>Miscellaneous</b>			
Over Voltage Category	II		
Protection Class	I		
Pollution Degree	2		
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2818VDC		

[1] For different input voltage standard option must be specified at the time of order as they are installed at the factory prior to shipment.

[2] Load transient from 0% to 100% of rated output.

[3] Test value at 100% voltage and 100% power.

[4] V<sub>rms</sub> @ 300kHz, V<sub>pp</sub> @ 20MHz, Arms @ 300kHz.

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP500VDC24000W	SP500VDC30000W	SP500VDC36000W	
<b>Input</b>				
Voltage <sup>(1)</sup>	200~253VAC 340~460VAC			
Current <sup>(1)</sup>	3P208 L1-60A, L2,L3-103A 3P400 L1-30A, L2,L3-49A	3P208 L1-125A,L2,L3-103A 3P400 L1-63A,L2,L3-49A	3P208 L1,L2,L3-125A 3P400 L1,L2,L3-63A	
Frequency	45~65Hz			
Connection	3ph, PE			
Fuse (Internal) <sup>(1)</sup>	T50A*2pcs T30A*2pcs			
Power Factor	>0.99			
Input Power	3P208 26.8kVAmax, 3P400 26.0kVAmax	3P208 33.5kVAmax, 3P400 32.5kVAmax	3P208 40.2kVAmax, 3P400 39.0kVAmax	
Efficiency <sup>(1)</sup>	3P208 ~92.5%@500V, 3P208 ~91%@128A 3P400 ~94%@500V, 3P400 ~92.5%@128A	3P208 ~92.5%@500V, 3P208 ~91%@160A 3P400 ~94%@500V, 3P400 ~92.5%@160A	3P208 ~92.5%@500V, 3P208 ~91%@192A 3P400 ~94%@500V, 3P400 ~92.5%@192A	
<b>Output</b>				
Voltage Range	0~500V			
Current Range	0~128A	0~160A	0~192A	
Power Range	0~24000W	0~30000W	0~36000W	
Max. Setup Range	Voltage	0~525V(0~105%)		
	Current	0~134.4A(0~105%)	0~168A(0~105%)	0~201.6A(0~105%)
	Power	0~26400W(0~105%)	0~31500W(0~105%)	0~37800W(0~105%)
	Internal Resistance	0~118Ω	0~94Ω	0~79Ω
Accuracy	Voltage	<0.1% Umax(500mV)		
	Current	<0.2% I <sub>max</sub> (256mA)	<0.2% I <sub>max</sub> (320mA)	<0.2% I <sub>max</sub> (384mA)
	Power	<1%+180W	<1%+240W	<1%+360W
	Internal Resistance	R<2% R <sub>max</sub> , I<0.3% I <sub>max</sub>		
Line Regulation	Voltage	<0.02% Umax(100mV)		
	Current	<0.05% I <sub>max</sub> (64mA)	<0.05% I <sub>max</sub> (80mA)	<0.05% I <sub>max</sub> (96mA)
	Power	<0.05% P <sub>max</sub>		
Load Regulation <sup>(2)</sup>	Voltage	<0.05% Umax(250mV) @Rated Voltage, <0.1% Umax(500mV) @Rated Current		
	Current	<0.15% I <sub>max</sub> (192mA)	<0.15% I <sub>max</sub> (240mA)	<0.15% I <sub>max</sub> (288mA)
	Power	<0.75% P <sub>max</sub>		
Rise Time	Voltage	<15ms (No Load) <80ms (Full Load)		
Drop Time	Voltage	<1500ms (No Load) <15ms (Full Load)		
Transient Response Time <sup>(3)</sup>	Voltage	≤1.5ms/5V		
Display Resolution	Voltage	0.01V		
	Current	0.001A		
	Power	1W		
	Internal Resistance	0.001Ω		
Measurement Accuracy	Voltage	<0.1% Umax(500mV)		
	Current	<0.2% I <sub>max</sub> (256mA)	<0.2% I <sub>max</sub> (320mA)	<0.2% I <sub>max</sub> (384mA)
	Power	<0.5% P <sub>max</sub>		
	Internal Resistance	<0.4% R <sub>max</sub>		
Ripple <sup>(4)</sup>	Voltage	<650mV <sub>pp</sub> , <160mV <sub>rms</sub>		
	Current	<64mArms	<80mArms	<96mArms
Remote Compensation	Voltage	3% Umax(15V)		
<b>Sink Function</b>				
Input Voltage	0~500V			
Input Current	0~56A	0~64A	0~80A	
Input Power	0~1300W	0~1625W	0~1950W	
Min. Operating Voltage	8V@56A	8V@64A	8V@80A	
CC Resolution	4mA	5mA	6mA	

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP500VDC24000W	SP500VDC30000W	SP500VDC36000W
CC Accuracy	<0.2% I <sub>max</sub> (112mA)	<0.2% I <sub>max</sub> (128mA)	<0.2% I <sub>max</sub> (160mA)
CV Resolution	<4mV		
CV Accuracy	<0.1% U <sub>max</sub> (500mV)		
CP Resolution	2W	2.5W	3W
CP Accuracy	<0.5% P <sub>max</sub> (6500mW)	<0.5% P <sub>max</sub> (8125mW)	<0.5% P <sub>max</sub> (9750mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
<b>General</b>			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numeric keys, Rotary knob, USB port for transfer and upgrading firmware		
Rack Mount Handles	Yes		
FAN	Temperature control		
Protection	OCP, OVP, OPP, OTP, HARD FAIL		
Interface	RS232/RS485/USB(Standard), GPIB/LAN(Optional), CAN(Optional)		
Command Response Time	<3ms		
<b>Analog Interface(Optional)</b>			
Set Value Inputs	Analog input 0~5V/0~10V or 0~5kΩ/0~10kΩ to set 0~105% voltage, current and power		
Actual Value Output	Analog output 0~5V/0~10V to monitor the voltage and current.		
Accuracy U/I/P/R	<0.2% F.S		
Actual Output U/I	<0.2%		
Control Signals	DC ON/OFF, External control Enable/Disable		
Status Signals	CV, OVP, OT		
Sampling Rate of Input & Output	45Hz		
Galvanic Isolation to the Device	2818VDC		
<b>Master/Slave Control</b>			
Series Output	MAX 2 units		
Parallel Output	MAX 16 units		
<b>Environmental</b>			
Operating Temperature	0~40°C		
Storage Temperature	-20~70°C		
Temperature Coefficient	100ppm/°C(voltage), 150ppm/°C(current)		
Relative Humidity	<95%RH(non-condensing)@35°C, <80%RH(non-condensing)@40°C		
Altitude	<2000m@40°C		
Fan Noise	48dB Idle; 77dB Max;	48dB Idle; 80dB Max;	48dB Idle; 82dB Max;
<b>Mechanical</b>			
Dimensions(WxHxD)	423.0x265.0x745.0 mm		
Package Dimensions(WxHxD)	549.0x531.0x946.0 mm		
Unit Weight	75kg	86kg	97kg
Shipping Weight	101kg	112kg	123kg
<b>Miscellaneous</b>			
Over Voltage Category	II		
Protection Class	I		
Pollution Degree	2		
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2818VDC		

[1] For different input voltage standard option must be specified at the time of order as they are installed at the factory prior to shipment.

[2] Load transient from 0% to 100% of rated output.

[3] Test value at 100% voltage and 100% power.

[4] V<sub>rms</sub> @ 300kHz, V<sub>pp</sub> @ 20MHz, Arms @ 300kHz.

# SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP750VDC6000W	SP750VDC12000W	SP750VDC18000W	
<b>Input</b>				
Voltage <sup>(1)</sup>	187~253VAC 340~460VAC			
Current <sup>(1)</sup>	3P208 L3-0, L1,L2-38A 3P400 L3-0, L1,L2-19A	3P208 L1-60A, L2,L3-38A 3P400 L1-30A, L2,L3-19A	3P208 L1,L2,L3-60A 3P400 L1,L2,L3-30A	
Frequency	45~65Hz			
Connection	2ph, PE	3ph, PE	3ph, PE	
Fuse (Internal) <sup>(1)</sup>	T50A*2pcs T30A*2pcs			
Power Factor	>0.99			
Input Power	3P208 6.7KVAmx, 3P400 6.5KVAmx	3P208 13.4KVAmx, 3P400 13.0KVAmx	3P208 20.1KVAmx, 3P400 19.5KVAmx	
Efficiency <sup>(1)</sup>	3P208 ~92.5%@750V, 3P208 ~91%@21A 3P400 ~92.7%@750V, 3P400 ~92%@21A	3P208 ~92.5%@750V, 3P208 ~91%@42A 3P400 ~92.7%@750V, 3P400 ~92%@42A	3P208 ~92.5%@750V, 3P208 ~91%@63A 3P400 ~92.7%@750V, 3P400 ~92%@63A	
<b>Output</b>				
Voltage Range	0~750V			
Current Range	0~21A	0~42A	0~63A	
Power Range	0~6000W	0~12000W	0~18000W	
Max. Setup Range	Voltage	0~787.5V(0~105%)		
	Current	0~22.05A(0~105%)	0~44.1A(0~105%)	0~66.15A(0~105%)
	Power	0~6300W(0~105%)		
	Internal Resistance	0~1072Ω	0~536Ω	0~358Ω
Accuracy	Voltage	<0.1% Umax(750mV)		
	Current	<0.2% I <sub>max</sub> (42mA)	<0.2% I <sub>max</sub> (84mA)	<0.2% I <sub>max</sub> (126mA)
	Power	<1%+60W		
	Internal Resistance	R<2% R <sub>max</sub> , I<0.3% I <sub>max</sub>		
Line Regulation	Voltage	<0.02% Umax(150mV)		
	Current	<0.05% I <sub>max</sub> (10.5mA)	<0.05% I <sub>max</sub> (21mA)	<0.05% I <sub>max</sub> (31.5mA)
	Power	<0.05% P <sub>max</sub>		
Load Regulation <sup>(2)</sup>	Voltage	<0.05% Umax(375mV) @Rated Voltage, <0.1% Umax(750mV) @Rated Current		
	Current	<0.15% I <sub>max</sub> (31.5mA)	<0.15% I <sub>max</sub> (63mA)	<0.15% I <sub>max</sub> (94.5mA)
	Power	<0.75% P <sub>max</sub>		
Rise Time	Voltage <15ms (No Load) <80ms (Full Load)			
Drop Time	Voltage <600ms (No Load) <20ms (Full Load)			
Transient Response Time <sup>(3)</sup>	Voltage ≤2ms/7.5V			
Display Resolution	Voltage	0.01V		
	Current	0.001A		
	Power	1W		
	Internal Resistance	0.001Ω		
Measurement Accuracy	Voltage	<0.1% Umax(750mV)		
	Current	<0.2% I <sub>max</sub> (42mA)	<0.2% I <sub>max</sub> (84mA)	<0.2% I <sub>max</sub> (126mA)
	Power	<0.5% P <sub>max</sub>		
	Internal Resistance	<0.4% R <sub>max</sub>		
Ripple <sup>(4)</sup>	Voltage	<900mVpp, <225mVrms	<1000mVpp, <250mVrms	<1000mVpp, <250mVrms
	Current	<11mArms	<22mArms	<33mArms
Remote Compensation	Voltage	3% Umax(22.5V)		
<b>Sink Function</b>				
Input Voltage	0~750V			
Input Current	0~10A	0~15A	0~25A	
Input Power	0~325W	0~650W	0~975W	
Min. Operating Voltage	5V@10A	5V@15A	5V@25A	
CC Resolution	1mA	2mA	3mA	

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP750VDC6000W	SP750VDC12000W	SP750VDC18000W
CC Accuracy	<0.2% I <sub>max</sub> (20mA)	<0.2% I <sub>max</sub> (30mA)	<0.2% I <sub>max</sub> (50mA)
CV Resolution	<4mV		
CV Accuracy	<0.1% U <sub>max</sub> (750mV)		
CP Resolution	0.5W	1.0W	1.5W
CP Accuracy	<0.5% P <sub>max</sub> (1625mW)	<0.5% P <sub>max</sub> (3250mW)	<0.5% P <sub>max</sub> (4875mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
<b>General</b>			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numeric keys, Rotary knob, USB port for transfer and upgrading firmware		
Rack Mount Handles	Yes		
FAN	Temperature control		
Protection	OCP, OVP, OPP, OTP, HARD FAIL		
Interface	RS232/RS485/USB(Standard), GPIB/LAN(Optional), CAN(Optional)		
Command Response Time	<3ms		
<b>Analog Interface(Optional)</b>			
Set Value Inputs	Analog input 0~5V/0~10V or 0~5kΩ/0~10kΩ to set 0~105% voltage, current and power		
Actual Value Output	Analog output 0~5V/0~10V to monitor the voltage and current.		
Accuracy U/I/P/R	<0.2% F.S		
Actual Output U/I	<0.2%		
Control Signals	DC ON/OFF, External control Enable/Disable		
Status Signals	CV, OVP, OT		
Sampling Rate of Input & Output	45Hz		
Galvanic Isolation to the Device	4242VDC		
<b>Master/Slave Control</b>			
Series Output	MAX 2 units		
Parallel Output	MAX 16 units		
<b>Environmental</b>			
Operating Temperature	0~40°C		
Storage Temperature	-20~70°C		
Temperature Coefficient	100ppm/°C(voltage), 150ppm/°C(current)		
Relative Humidity	<95%RH(non-condensing)@35°C, <80%RH(non-condensing)@40°C		
Altitude	<2000m@40°C		
Fan Noise	45dB Idle; 71dB Max;	45dB Idle; 73dB Max;	45dB Idle; 75dB Max;
<b>Mechanical</b>			
Dimensions(WxHxD)	423.0x133.0x718.0 mm		
Package Dimensions(WxHxD)	665.0x347.0x1009.0 mm		
Unit Weight	27kg	38kg	50kg
Shipping Weight	37kg	48kg	60kg
<b>Miscellaneous</b>			
Over Voltage Category	II		
Protection Class	I		
Pollution Degree	2		
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2818VDC		

[1] For different input voltage standard option must be specified at the time of order as they are installed at the factory prior to shipment.

[2] Load transient from 0% to 100% of rated output.

[3] Test value at 100% voltage and 100% power.

[4] V<sub>rms</sub> @ 300kHz, V<sub>pp</sub> @ 20MHz, Arms @ 300kHz.

# SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP750VDC24000W	SP750VDC30000W	SP750VDC36000W	
<b>Input</b>				
Voltage <sup>(1)</sup>	200~253VAC 340~460VAC			
Current <sup>(1)</sup>	3P208 L3-60A, L1,L2-103A 3P400 L3-30A, L1,L2-49A	3P208 L1-125A,L2,L3-103A 3P400 L1-63A,L2,L3-49A	3P208 L1,L2,L3-125A 3P400 L1,L2,L3-63A	
Frequency	45~65Hz			
Connection	3ph, PE			
Fuse (Internal) <sup>(1)</sup>	T50A*2pcs T30A*2pcs			
Power Factor	>0.99			
Input Power	3P208 26.8KVAmx, 3P400 26.0KVAmx	3P208 33.5KVAmx, 3P400 32.5KVAmx	3P208 40.2KVAmx, 3P400 39.0KVAmx	
Efficiency <sup>(1)</sup>	3P208 ~92.5%@750V, 3P208 ~91%@84A 3P400 ~92.7%@750V, 3P400 ~92%@84A	3P208 ~92.5%@750V, 3P208 ~91%@105A 3P400 ~92.7%@750V, 3P400 ~92%@105A	3P208 ~92.5%@750V, 3P208 ~91%@126A 3P400 ~92.7%@750V, 3P400 ~92%@126A	
<b>Output</b>				
Voltage Range	0~750V			
Current Range	0~84A	0~105A	0~126A	
Power Range	0~24000W	0~30000W	0~36000W	
Max. Setup Range	Voltage	0~787.5V(0~105%)		
	Current	0~88.2A(0~105%)	0~110.25A(0~105%)	0~132.3A(0~105%)
	Power	0~26400W(0~105%)	0~31500W(0~105%)	0~37800W(0~105%)
	Internal Resistance	0~268Ω	0~215Ω	0~179Ω
Accuracy	Voltage	<0.1% Umax(750mV)		
	Current	<0.2% I <sub>max</sub> (168mA)	<0.2% I <sub>max</sub> (210mA)	<0.2% I <sub>max</sub> (252mA)
	Power	<1%+180W	<1%+240W	<1%+360W
	Internal Resistance	R<2% R <sub>max</sub> , I<0.3% I <sub>max</sub>		
Line Regulation	Voltage	<0.02% Umax(150mV)		
	Current	<0.05% I <sub>max</sub> (42mA)	<0.05% I <sub>max</sub> (52.5mA)	<0.05% I <sub>max</sub> (63mA)
	Power	<0.05% P <sub>max</sub>		
Load Regulation <sup>(2)</sup>	Voltage	<0.05% Umax(375mV) @Rated Voltage, <0.1% Umax(750mV) @Rated Current		
	Current	<0.15% I <sub>max</sub> (126mA)	<0.15% I <sub>max</sub> (157.5mA)	<0.15% I <sub>max</sub> (189mA)
	Power	<0.75%P <sub>max</sub>		
Rise Time	Voltage	<15ms (No Load) <80ms (Full Load)		
Drop Time	Voltage	<600ms (No Load) <20ms (Full Load)		
Transient Response Time <sup>(3)</sup>	Voltage	≤2ms/7.5V		
Display Resolution	Voltage	0.01V		
	Current	0.001A		
	Power	1W		
	Internal Resistance	0.001Ω		
Measurement Accuracy	Voltage	<0.1% Umax(750mV)		
	Current	<0.2% I <sub>max</sub> (168mA)	<0.2% I <sub>max</sub> (210mA)	<0.2% I <sub>max</sub> (252mA)
	Power	<0.5% P <sub>max</sub>		
	Internal Resistance	<0.4% R <sub>max</sub>		
Ripple <sup>(4)</sup>	Voltage	<1000mVpp, <250mVrms		
	Current	<44mArms	<55mArms	<66mArms
Remote Compensation	Voltage	3% Umax(22.5V)		
<b>Sink Function</b>				
Input Voltage	0~750V			
Input Current	0~35A	0~40A	0~45A	
Input Power	0~1200W	0~1500W	0~1800W	
Min. Operating Voltage	5V@35A	5V@40A	5V@45A	
CC Resolution	4mA	5mA	6mA	

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP750VDC24000W	SP750VDC30000W	SP750VDC36000W
CC Accuracy	<0.2% I <sub>max</sub> (70mA)	<0.2% I <sub>max</sub> (80mA)	<0.2% I <sub>max</sub> (90mA)
CV Resolution	<4mV		
CV Accuracy	<0.1% U <sub>max</sub> (750mV)		
CP Resolution	2W	2.5W	3W
CP Accuracy	<0.5% P <sub>max</sub> (6000mW)	<0.5% P <sub>max</sub> (7500mW)	<0.5% P <sub>max</sub> (9000mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
<b>General</b>			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numeric keys, Rotary knob, USB port for transfer and upgrading firmware		
Rack Mount Handles	Yes		
FAN	Temperature control		
Protection	OCP, OVP, OPP, OTP, HARD FAIL		
Interface	RS232/RS485/USB(Standard), GPIB/LAN(Optional), CAN(Optional)		
Command Response Time	<3ms		
<b>Analog Interface(Optional)</b>			
Set Value Inputs	Analog input 0~5V/0~10V or 0~5kΩ/0~10kΩ to set 0~105% voltage, current and power		
Actual Value Output	Analog output 0~5V/0~10V to monitor the voltage and current.		
Accuracy U/I/P/R	<0.2% F.S		
Actual Output U/I	<0.2%		
Control Signals	DC ON/OFF, External control Enable/Disable		
Status Signals	CV, OVP, OT		
Sampling Rate of Input & Output	45Hz		
Galvanic Isolation to the Device	4242VDC		
<b>Master/Slave Control</b>			
Series Output	MAX 2 units		
Parallel Output	MAX 16 units		
<b>Environmental</b>			
Operating Temperature	0~40°C		
Storage Temperature	-20~70°C		
Temperature Coefficient	100ppm/°C(voltage), 150ppm/°C(current)		
Relative Humidity	<95%RH(non-condensing)@35°C, <80%RH(non-condensing)@40°C		
Altitude	<2000m@40°C		
Fan Noise	48dB Idle; 77dB Max;	48dB Idle; 80dB Max;	48dB Idle; 82dB Max;
<b>Mechanical</b>			
Dimensions(WxHxD)	423.0x265.0x745.0 mm		
Package Dimensions(WxHxD)	549.0x531.0x946.0 mm		
Unit Weight	75kg	86kg	97kg
Shipping Weight	101kg	112kg	123kg
<b>Miscellaneous</b>			
Over Voltage Category	II		
Protection Class	I		
Pollution Degree	2		
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2818VDC		

[1] For different input voltage standard option must be specified at the time of order as they are installed at the factory prior to shipment.

[2] Load transient from 0% to 100% of rated output.

[3] Test value at 100% voltage and 100% power.

[4] V<sub>rms</sub> @ 300kHz, V<sub>pp</sub> @ 20MHz, Arms @ 300kHz.

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP1000VDC12000W	SP1000VDC24000W	SP1000VDC36000W
<b>Input</b>			
Voltage <sup>[1]</sup>	187~253VAC 340~460VAC	200~253VAC	200~253VAC
Current <sup>[1]</sup>	3P208 L1-60A, L2,L3-38A 3P400 L1-30A, L2,L3-19A	3P208 L3-60A, L1,L2-103A 3P400 L3-30A, L1,L2-49A	3P208 L1, L2,L3-103A 3P400 L1, L2,L3-63A
Frequency	45~65Hz		
Connection	3ph, PE		
Fuse (Internal) <sup>[1]</sup>	T50A*2pcs T30A*2pcs		
Power Factor	>0.99		
Input Power	3P208 13.8kVAmax, 3P400 13.4kVAmax	3P208 27.6kVAmax, 3P400 26.8kVAmax	3P208 40.2kVAmax, 3P400 39.0kVAmax
Efficiency <sup>[1]</sup>	3P208 ~92%@1000V, 3P208 ~90%@32A 3P400 ~93.5%@1000V, 3P400 ~92%@32A	3P208 ~92%@1000V, 3P208 ~90%@64A 3P400 ~93.5%@1000V, 3P400 ~92%@64A	3P208 ~92%@1000V, 3P208 ~90%@96A 3P400 ~93.5%@1000V, 3P400 ~92%@96A
<b>Output</b>			
Voltage Range	0~1000V		
Current Range	0~32A	0~64A	0~96A
Power Range	0~12000W	0~24000W	0~36000W
Max. Setup Range	Voltage	0~1050V(0~105%)	
	Current	0~33.6A(0~105%)	0~67.2A(0~105%)
	Power	0~12600W(0~105%)	
	Internal Resistance	0~937.5Ω	0~468.75Ω
Accuracy	Voltage	<0.1% Umax(1000mV)	
	Current	<0.2% I <sub>max</sub> (64mA)	<0.2% I <sub>max</sub> (128mA)
	Power	<1%+90W	<1%+180W
	Internal Resistance	R<2% R <sub>max</sub> , l<0.3% I <sub>max</sub>	
Line Regulation	Voltage	<0.02% Umax(200mV)	
	Current	<0.05% I <sub>max</sub> (16mA)	<0.05% I <sub>max</sub> (32mA)
	Power	<0.05% P <sub>max</sub>	
Load Regulation <sup>[2]</sup>	Voltage	<0.05% Umax(500mV) @Rated Voltage, <0.08% Umax(800mV) @Rated Current	
	Current	<0.15% I <sub>max</sub> (48mA)	<0.15% I <sub>max</sub> (96mA)
	Power	<0.75%P <sub>max</sub>	
Rise Time	Voltage <15ms (No Load) <85ms (Full Load)	<15ms (No Load) <85ms (Full Load)	<15ms (No Load) <80ms (Full Load)
Drop Time	Voltage <1700ms (No Load) <15ms (Full Load)		
Transient Response Time <sup>[3]</sup>	Voltage ≤2ms/10V	≤2ms/10V	≤1.5ms/5V
Display Resolution	Voltage	0.01V	
	Current	0.001A	
	Power	1W	
	Internal Resistance	0.001Ω	
Measurement Accuracy	Voltage	<0.1% Umax(1V)	
	Current	<0.2% I <sub>max</sub> (64mA)	<0.2% I <sub>max</sub> (128mA)
	Power	<0.5% P <sub>max</sub>	
	Internal Resistance	<0.4% R <sub>max</sub>	
Ripple <sup>[4]</sup>	Voltage	<1500mVpp, <320mVrms	
	Current	<22mArms	<26mArms
Remote Compensation	Voltage	3% Umax(30V)	
<b>General</b>			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numeric keys, Rotary knob, USB port for transfer and upgrading firmware		
Rack Mount Handles	Yes		
FAN	Temperature control		
Protection	OCP, OVP, OPP, OTP, HARD FAIL		



## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP1000VDC12000W	SP1000VDC24000W	SP1000VDC36000W
Interface	RS232/RS485/USB(Standard), GPIB/LAN(Optional), CAN(Optional)		
Command Response Time	<3ms		
<b>Analog Interface(Optional)</b>			
Set Value Inputs	Analog input 0~5V/0~10V or 0~5kΩ/0~10kΩ to set 0~105% voltage, current and power		
Actual Value Output	Analog output 0~5V/0~10V to monitor the voltage and current.		
Accuracy U/I/P/R	<0.2% F.S		
Actual Output U/I	<0.2%		
Control Signals	DC ON/OFF, External control Enable/Disable		
Status Signals	CV, OVP, OT		
Sampling Rate of Input & Output	45Hz		
Galvanic Isolation to the Device	4242VDC		
<b>Master/Slave Control</b>			
Series Output	Not supported		
Parallel Output	MAX 16 units		
<b>Environmental</b>			
Operating Temperature	0~40°C		
Storage Temperature	-20~70°C		
Temperature Coefficient	100ppm/°C(voltage), 150ppm/°C(current)		
Relative Humidity	<95%RH(non-condensing)@35°C, <80%RH(non-condensing)@40°C		
Altitude	<2000m@40°C		
Fan Noise	45dB Idle; 73dB Max;	48dB Idle; 80dB Max;	48dB Idle; 82dB Max;
<b>Mechanical</b>			
Dimensions(WxHxD)	423.0x133.0x718.0 mm	423.0x265.0x745.0 mm	423.0x265.0x745.0 mm
Package Dimensions(WxHxD)	665.0x347.0x1009.0 mm	549.0x531.0x946.0 mm	549.0x531.0x946.0 mm
Unit Weight	38kg	75kg	97kg
Shipping Weight	48kg	101kg	123kg
<b>Miscellaneous</b>			
Over Voltage Category	II		
Protection Class	I		
Pollution Degree	2		
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2818VDC		

[1] For different input voltage standard option must be specified at the time of order as they are installed at the factory prior to shipment.

[2] Load transient from 0% to 100% of rated output.

[3] Test value at 100% voltage and 100% power.

[4] Vrms @ 300kHz, Vpp @ 20MHz, Arms @ 300kHz.

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP1500VDC12000W		SP1500VDC18000W
<b>Input</b>			
Voltage <sup>[1]</sup>	187~253VAC		340~460VAC
Current <sup>[1]</sup>	3P208 L1-60A, L2,L3-38A		3P208 L1,L2,L3-60A
	3P400 L1-30A, L2,L3-19A		3P400 L1,L2,L3-30A
Frequency	45~65Hz		
Connection	3ph, PE		
Fuse (Internal) <sup>[1]</sup>	T50A*2pcs		T30A*2pcs
	T25A*2pcs		
Power Factor	>0.99		
Input Power	3P208 13.8KVAmx, 3P400 13.4KVAmx		3P208 20.5KVAmx, 3P400 19.9KVAmx
Efficiency <sup>[1]</sup>	3P208 ~92%@1500V, 3P208 ~90.5%@21A		3P208 ~92%@1500V, 3P208 ~90%@32A
	3P400 ~92.5%@1500V, 3P400 ~91.5%@21A		3P400 ~93.5%@1500V, 3P400 ~92%@32A
<b>Output</b>			
Voltage Range	0~1500V		
Current Range	0~21A		0~32A
Power Range	0~12000W		0~18000W
Max. Setup Range	Voltage	0~1575V(0~105%)	
	Current	0~22.05A(0~105%)	0~33.6A(0~105%)
	Power	0~12600W(0~105%)	
	Internal Resistance	0~2142Ω	0~1406.3Ω
Accuracy	Voltage	<0.1% Umax(1.5V)	
	Current	<0.2% Imax(42mA)	<0.2% Imax(64mA)
	Power	<1%+90W	
	Internal Resistance	R<2% Rmax, I<0.3% Imax	
Line Regulation	Voltage	<0.02% Umax(300mV)	
	Current	<0.05% Imax(10.5mA)	<0.05% Imax(16mA)
	Power	<0.05% Pmax	
Load Regulation <sup>[2]</sup>	Voltage	<0.05% Umax(750mV) @Rated Voltage, <0.08% Umax(1200mV) @Rated Current	
	Current	<0.15% Imax(31.5mA)	<0.15% Imax(48mA)
	Power	<0.75% Pmax	
Rise Time	Voltage	<15ms (No Load) <80ms (Full Load)	<15ms (No Load) <90ms (Full Load)
Drop Time	Voltage	<700ms (No Load) <20ms (Full Load)	<1800ms (No Load) <15ms (Full Load)
Transient Response Time <sup>[3]</sup>	Voltage	≤2ms/15V	
Display Resolution	Voltage	0.01V	
	Current	0.001A	
	Power	1W	0.1W
	Internal Resistance	0.001Ω	
Measurement Accuracy	Voltage	<0.1% Umax(1.5V)	
	Current	<0.2% Imax(42mA)	<0.2% Imax(64mA)
	Power	<0.5% Pmax	
	Internal Resistance	<0.4% Rmax	
Ripple <sup>[4]</sup>	Voltage	<2500mVpp, <600mVrms	
	Current	<11mArms	<22mArms
Remote Compensation	Voltage	3% Umax(45V)	
<b>General</b>			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numeric keys, Rotary knob, USB port for transfer and upgrading firmware		
Rack Mount Handles	Yes		
FAN	Temperature control		
Protection	OCP, OVP, OPP, OTP, HARD FAIL		

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP1500VDC12000W	SP1500VDC18000W
Interface	RS232/RS485/USB(Standard), GPIB/LAN(Optional), CAN(Optional)	
Command Response Time	<3ms	
Analog Interface(Optional)		
Set Value Inputs	Analog input 0~5V/0~10V or 0~5kΩ/0~10kΩ to set 0~105% voltage, current and power	
Actual Value Output	Analog output 0~5V/0~10V to monitor the voltage and current.	
Accuracy U/I/P/R	<0.2% F.S	
Actual Output U/I	<0.2%	
Control Signals	DC ON/OFF, External control Enable/Disable	
Status Signals	CV, OVP, OT	
Sampling Rate of Input & Output	45Hz	
Galvanic Isolation to the Device	5250VDC	
Master/Slave Control		
Series Output	MAX 2 units	
Parallel Output	MAX 16 units	
Environmental		
Operating Temperature	0~40°C	
Storage Temperature	-20~70°C	
Temperature Coefficient	100ppm/°C(voltage), 150ppm/°C(current)	
Relative Humidity	<95%RH(non-condensing)@35°C, <80%RH(non-condensing)@40°C	
Altitude	<2000m@40°C	
Fan Noise	45dB Idle; 73dB Max;	45dB Idle; 75dB Max;
Mechanical		
Dimensions(WxHxD)	423.0x133.0x718.0 mm	
Package Dimensions(WxHxD)	665.0x347.0x1009.0 mm	
Unit Weight	38kg	50kg
Shipping Weight	48kg	60kg
Miscellaneous		
Over Voltage Category	II	
Protection Class	I	
Pollution Degree	2	
Insulation	AC input <->DC output, 5040VDC, AC input <-> PE, 2818VDC	

[1] For different input voltage standard option must be specified at the time of order as they are installed at the factory prior to shipment.

[2] Load transient from 0% to 100% of rated output.

[3] Test value at 100% voltage and 100% power.

[4] Vrms @ 300kHz, Vpp @ 20MHz, Arms @ 300kHz.

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL		SP1500VDC24000W	SP1500VDC36000W
<b>Input</b>			
Voltage <sup>[1]</sup>	200~253VAC		
	340~460VAC		
Current <sup>[1]</sup>	3P208 L1-60A, L2,L3-103A		3P208 L1,L2,L3-125A
	3P400 L1-30A, L2,L3-49A		3P400 L1,L2,L3-63A
Frequency	45~65Hz		
Connection	3ph, PE		
Fuse (Internal) <sup>[1]</sup>	T50A*2pcs		
	T25A*2pcs		
Power Factor	>0.99		
Input Power	3P208 27.6KVAmx, 3P400 26.8KVAmx		3P208 40.2KVAmx, 3P400 39.0KVAmx
Efficiency <sup>[1]</sup>	3P208 ~92%@1500V, 3P208 ~90.5%@42A		3P208 ~92%@1500V, 3P208 ~90.5%@63A
	3P400 ~92.5%@1500V, 3P400 ~91.5%@42A		3P400 ~92.5%@1500V, 3P400 ~91.5%@63A
<b>Output</b>			
Voltage Range	0~1500V		
Current Range	0~42A		0~63A
Power Range	0~24000W		0~36000W
Max. Setup Range	Voltage	0~1575V(0~105%)	
	Current	0~44.1A(0~105%)	0~66.15A(0~105%)
	Power	0~26400W(0-105%)	
	Internal Resistance	0~1071Ω	
Accuracy	Voltage	<0.1% Umax(1.5V)	
	Current	<0.2% Imax(84mA)	<0.2% Imax(126mA)
	Power	<1%+180W	
	Internal Resistance	R<2% Rmax, I<0.3% Imax	
Line Regulation	Voltage	<0.02% Umax(300mV)	
	Current	<0.05% Imax(21mA)	<0.05% Imax(31.5mA)
	Power	<0.05% Pmax	
Load Regulation <sup>[2]</sup>	Voltage	<0.05% Umax(750mV) @Rated Voltage, <0.08% Umax(1200mV) @Rated Current	
	Current	<0.15% Imax(63mA)	<0.15%Imax(94.5mA)
	Power	<0.75% Pmax	
Rise Time	Voltage	<15ms (No Load) <80ms (Full Load)	
Drop Time	Voltage	<700ms (No Load) <20ms (Full Load)	
Transient Response Time <sup>[3]</sup>	Voltage	≤2ms/15V	
Display Resolution	Voltage	0.01V	
	Current	0.001A	
	Power	1W	
	Internal Resistance	0.001Ω	
Measurement Accuracy	Voltage	<0.1% Umax(1.5V)	
	Current	<0.2% Imax(84mA)	<0.2% Imax(126mA)
	Power	<0.5% Pmax	
	Internal Resistance	<0.4% Rmax	
Ripple <sup>[4]</sup>	Voltage	<2500mVpp, <600mVrms	
	Current	<22mArms	<33mArms
Remote Compensation	Voltage	3% Umax(45V)	
<b>General</b>			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numeric keys, Rotary knob, USB port for transfer and upgrading firmware		
Rack Mount Handles	Yes		
FAN	Temperature control		
Protection	OCP, OVP, OPP, OTP, HARD FAIL		

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP1500VDC24000W	SP1500VDC36000W
Interface	RS232/RS485/USB(Standard), GPIB/LAN(Optional), CAN(Optional)	
Command Response Time	<3ms	
<b>Analog Interface(Optional)</b>		
Set Value Inputs	Analog input 0~5V/0~10V or 0~5kΩ/0~10kΩ to set 0~105% voltage, current and power	
Actual Value Output	Analog output 0~5V/0~10V to monitor the voltage and current.	
Accuracy U/I/P/R	<0.2% F.S	
Actual Output U/I	<0.2%	
Control Signals	DC ON/OFF, External control Enable/Disable	
Status Signals	CV, OVP, OT	
Sampling Rate of Input & Output	45Hz	
Galvanic Isolation to the Device	5250VDC	
<b>Master/Slave Control</b>		
Series Output	Not supported	
Parallel Output	MAX 16 units	
<b>Environmental</b>		
Operating Temperature	0~40°C	
Storage Temperature	-20~70°C	
Temperature Coefficient	100ppm/°C(voltage), 150ppm/°C(current)	
Relative Humidity	<95%RH(non-condensing)@35°C, <80%RH(non-condensing)@40°C	
Altitude	<2000m@40°C	
Fan Noise	48dB Idle; 80dB Max;	48dB Idle; 82dB Max;
<b>Mechanical</b>		
Dimensions(WxHxD)	423.0x265.0x745.0 mm	
Package Dimensions(WxHxD)	549.0x531.0x946.0 mm	
Unit Weight	75kg	97kg
Shipping Weight	101kg	123kg
<b>Miscellaneous</b>		
Over Voltage Category	II	
Protection Class	I	
Pollution Degree	2	
Insulation	AC input <->DC output, 5040VDC, AC input <-> PE, 2818VDC	

[1] For different input voltage standard option must be specified at the time of order as they are installed at the factory prior to shipment.

[2] Load transient from 0% to 100% of rated output.

[3] Test value at 100% voltage and 100% power.

[4] Vrms @ 300kHz, Vpp @ 20MHz, Arms @ 300kHz.

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL		SP2250VDC18000W
<b>Input</b>		
Voltage <sup>[1]</sup>		187~253VAC
		340~460VAC
Current <sup>[1]</sup>		3P208 L1,L2,L3-60A
		3P400 L1,L2,L3-30A
Frequency		45~65Hz
Connection		3ph, PE
Fuse (Internal) <sup>[1]</sup>		T50A*2pcs
		T25A*2pcs
Power Factor		>0.99
Input Power		3P208 20.1KVAmx, 3P400 19.5KVAmx
Efficiency <sup>[1]</sup>		3P208 ~92%@2250V, 3P208 ~90.5%@21A
		3P400 ~92.5%@2250V, 3P400 ~91.5%@21A
<b>Output</b>		
Voltage Range		2250V
Current Range		0~21A
Power Range		0~18000W
Max. Setup Range	Voltage	0~2362.5V(0-105%)
	Current	0~22.05A(0-105%)
	Power	0~18900W(0~105%)
	Internal Resistance	0~3214Ω
Accuracy	Voltage	<0.1% Umax/(2.25V)
	Current	<0.2% Imax(42mA)
	Power	<0.5%+90W
	Internal Resistance	R<2% Rmax, I<0.3% Imax
Line Regulation	Voltage	<0.02% Umax(675mV)
	Current	<0.05% Imax(10.5mA)
	Power	<0.05% Pmax
Load Regulation <sup>[2]</sup>	Voltage	<0.05% Umax(1125mV) @Rated Voltage, <0.08% Umax(1800mV) @Rated Current
	Current	<0.15% Imax(31.5mA)
	Power	<0.75% Pmax
Rise Time	Voltage	<15ms (No Load) <85ms (Full Load)
Drop Time	Voltage	<800ms (No Load) <20ms (Full Load)
Transient Response Time <sup>[3]</sup>	Voltage	≤3ms/22.5V
Display Resolution	Voltage	0.01V
	Current	0.001A
	Power	0.1W
	Internal Resistance	0.001Ω
Measurement Accuracy	Voltage	<0.1% Umax(2.25V)
	Current	<0.2% Imax(42mA)
	Power	<0.5% Pmax
	Internal Resistance	<0.4% Rmax
Ripple <sup>[4]</sup>	Voltage	<3200mVpp, <750mVrms
	Current	<11mA <sub>rms</sub>
Remote Compensation	Voltage	3% Umax(67.5V)
<b>General</b>		
Graphic Display		4.3" Color touch LCD
Operation Key Feature		Soft keys, Numeric keys, Rotary knob, USB port for transfer and upgrading firmware
Rack Mount Handles		Yes
FAN		Temperature control
Protection		OCP, OVP, OPP, OTP, HARD FAIL

## SP-3U/6U Series Wide-range High-power Programmable DC Power Supply

MODEL	SP2250VDC18000W
Interface	RS232/RS485/USB(Standard), GPIB/LAN(Optional), CAN(Optional)
Command Response Time	<3ms
Set Value Inputs	Analog input 0~5V/0~10V or 0~5kΩ/0~10kΩ to set 0~105% voltage, current and power
Actual Value Output	Analog output 0~5V/0~10V to monitor the voltage and current.
Accuracy U/I/P/R	<0.2% F.S
Actual Output U/I	<0.2%
Control Signals	DC ON/OFF, External control Enable/Disable
Status Signals	CV, OVP, OT
Sampling Rate of Input & Output	45Hz
Galvanic Isolation to the Device	6300VDC
<b>Master/Slave Control</b>	
Series Output	Not supported
Parallel Output	MAX 16 units
<b>Environmental</b>	
Operating Temperature	0~40°C
Storage Temperature	-20~70°C
Temperature Coefficient	100ppm/°C(voltage), 150ppm/°C(current)
Relative Humidity	<95%RH(non-condensing)@35°C, <80%RH(non-condensing)@40°C
Altitude	<2000m@40°C
Fan Noise	45dB Idle; 75dB Max;
<b>Mechanical</b>	
Dimensions(WxHxD)	423.0x133.0x718.0 mm
Package Dimensions(WxHxD)	665.0x347.0x1009.0 mm
Unit Weight	50kg
Shipping Weight	60kg
<b>Miscellaneous</b>	
Over Voltage Category	II
Protection Class	I
Pollution Degree	2
Insulation	AC input <->DC output, 5040VDC, AC input <-> PE, 2818VDC

[1] For different input voltage standard option must be specified at the time of order as they are installed at the factory prior to shipment.

[2] Load transient from 0% to 100% of rated output.

[3] Test value at 100% voltage and 100% power.

[4] Vrms @ 300kHz, Vpp @ 20MHz, Arms @ 300kHz.

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