APM Technologies®

Product Brochure

- *High Efficiency*
- *High Precision*
- *High Stability*

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APM Technologies

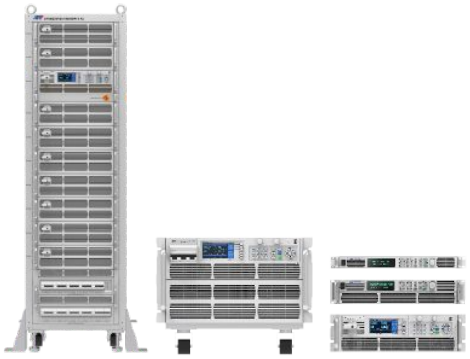
Company Profile

APM Technologies Ltd is a high-tech enterprise specialized in the research & development (R&D), production and distribution of programmable power supply, Electronic Load, automated testing system, automated manufacturing equipment, marine smart system (MSS) and PV solar inverter. Our company has complete systems in product planning, research & development, laboratory experiment, testing, and quality control. In addition, we have passed the ISO 9001 standard certifications(2018-2021).

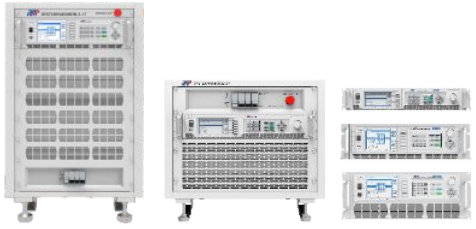
APM Technologies' R&D team consists of more than 100 personnel encompassing Ph.D. and master degree holders as well as senior experts in the related industries. By collaborating with a number of domestic and international research teams and maintaining a long term strategic cooperation with leading colleges and universities, our company can ensure products and services are leading the industry. Through applying our professional techniques and technologies to continually innovate and break through, so far APM Technologies has applied for a number of invention patents and already obtained a number of utility patents, design patents, software copyrights and other related patents. Our products have passed the CE, VDE, SAA, CQC, CSA, FCC, ROHS, etc. certifications.

APM Technologies from the beginning to the present, and from the past to the future, has always uphold the company spirit of "Constant Pursuit of Excellence" so as to provide our customers with the " 24 Hours a Day of Continuing Services ".

Contents



DC Power Supply



AC Power Supply

DC Electronic Load

Test system

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

APM provides stable DC output and wider range voltage and current. For single unit, current range could reach to 200A. Voltage range could reach to 800V. One unit programmable power supplier could substitute several rectangular power. It could output multiple voltage and current group, timer control function, provide OVP、OCP、OPP via front panel or PC. It supports list file function with built-in automotive electronics test waveform. Standard interfaces include RS232、RS485、USB、LAN. GPIB is optional. It could apply in various fields.

(1U)600W~1600W

(2U)1000W~4000W

Features

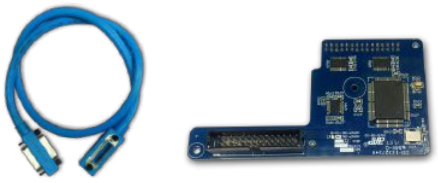
- Low ripple and noise.
- High accuracy and high resolution.
- CC and CV working mode switch freely.
- Support LIST/SEQUENCE file editing.
- OVP/OCP/OPP/OTP/SCP.
- Remote compensation.
- With external analog control input interface.
- Standard USB/LAN/RS485/RS232 communication interface.
- Master/Slave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

Quick Selection：

Output Voltage	1U					2U			
	600W	1000W	1200W	1500W	1600W	1000W	2000W	3000W	4000W
20VDC	60A	60A	60A	*	*	*	*	*	*
32VDC	50A	50A	50A	*	50A	200A	200A	200A	200A
40VDC	40A	40A	40A	*	40A	120A	120A	120A	120A
75VDC	25A	25A	25A	25A	*	*	*	*	60A
80VDC	*	*	*	*	*	60A	60A	60A	*
120VDC	*	*	*	*	*	40A	40A	40A	40A
150VDC	10A	10A	10A	10A	*	30A	30A	30A	30A
200VDC	8A	8A	8A	8A	*	24A	24A	24A	24A
600VDC	*	*	*	*	*	10A	10A	10A	10A
800VDC	*	*	*	*	*	7.5A	7.5A	7.5A	7.5A

Optional Information

GPIB communication card & cables



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

Front Panel Introduction

1U Power Supply Front Panel

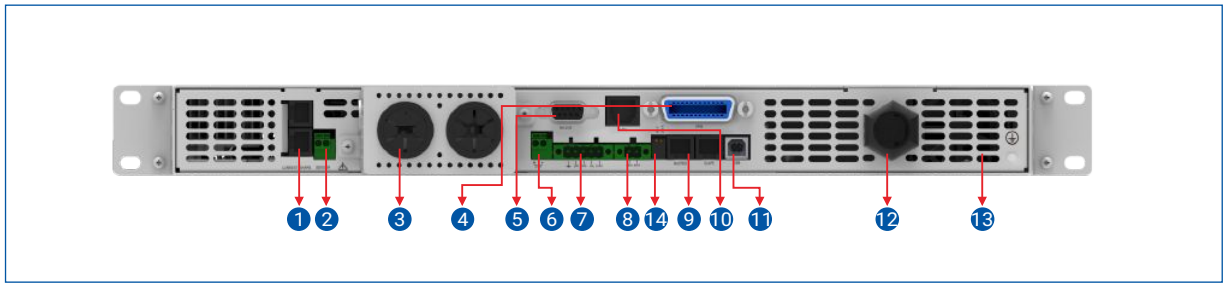
2U Power Supply Front Panel

Key	Introduction
0~9	Numeric Key
.	Decimal Point
esc	Escape
▲	UP, used for choose menu or increase set value in menu operation
▼	DOWN, used for choose menu or decrease set value in menu operation
Enter	Enter
V-set	Set power supply's output voltage value
I-set	Set power supply's output current-limiting value

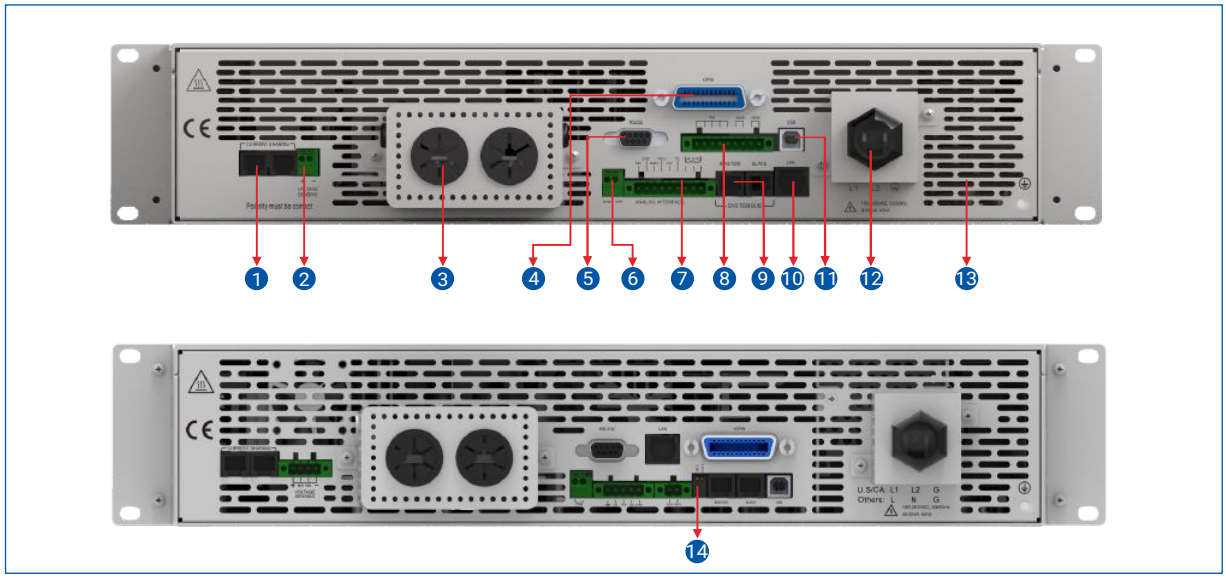
Key	Introduction
Display	Press it to back to the main interface quickly
On/Off	Control ON/OFF of power supply
Menu	Menu
Shift	Work with functional keys to realize multifunction
LOCAL	Panel operation
RECALL	Recall stored setting value of power supply from internal storage
STORE	Store current settings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

Back Panel Introduction

1U Power Supply Back Panel



2U Power Supply Back Panel

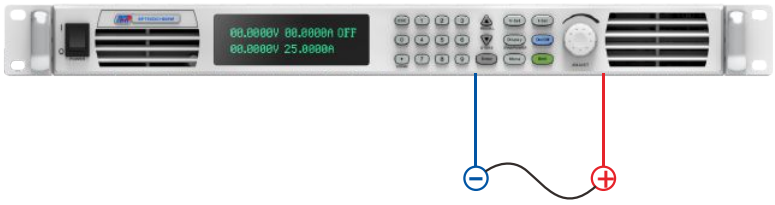


1. AVG1/AVG2 Connector, used for connecting between units to enable current sharing.
2. Voltage Remote Supporting Connector (VOLTAGE SENSING): Used to support wire voltage drops.
3. DC output terminal: Left (-), Right (+).
4. GPIB Communication connector.
5. RS-232 Communication connector.
6. DVM Connector.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

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

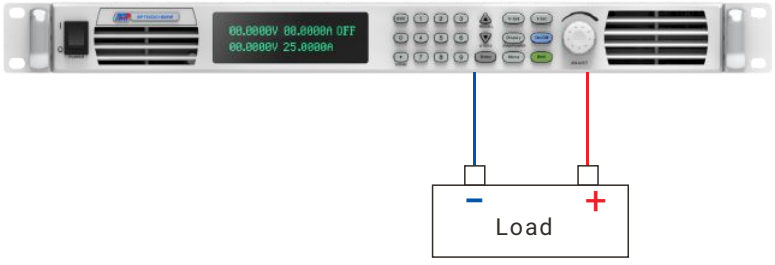
Short Mode

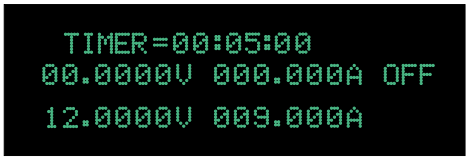
This function is applicable to cable/fuse current carrying capacity test, when activated , the power supply will shutdown the short circuit protection function and maintain ultra-low voltage to output rated current.



Timer Control Function

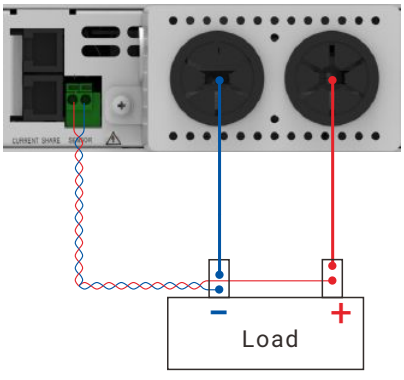
This function is applicable to unattended occasions, activate the timer and the output, the screen will show the countdown of the timer. Once it reaches down to zero, the supply will turn off the output automatically. And the full protection of the power supply will make sure the safe usage of this function.





Remote Compensation Function

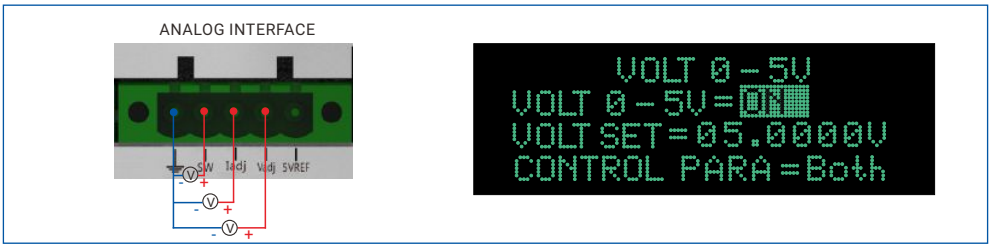
This function is applicable to compensate the voltage drop on the load line in order to improve the accuracy of test. In practical applications, even if the voltage drop is negligible, it is best to connect the remote compensation cable to the output terminal. When using the remote compensation functionality,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



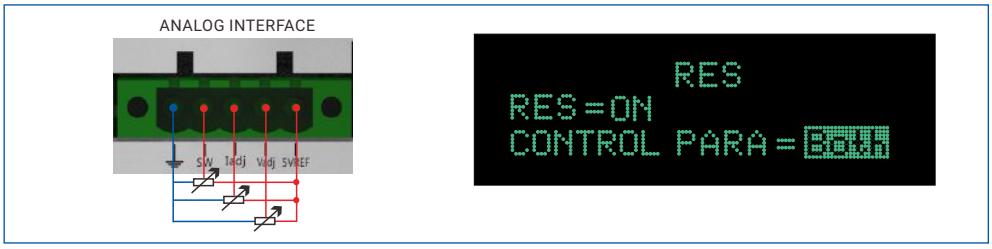
External Control Function

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

External Voltage Control



External Potentiometer Control

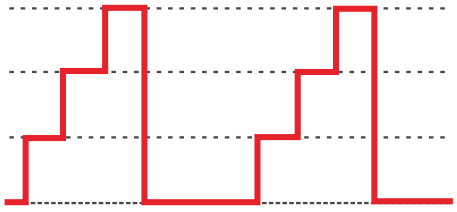


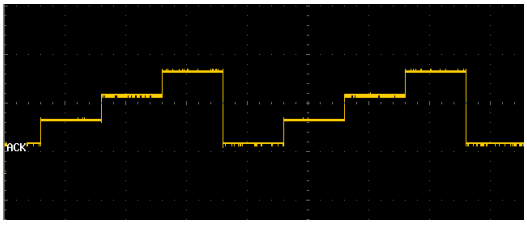
LIST Waveform Editing Function

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

Impulse File Format

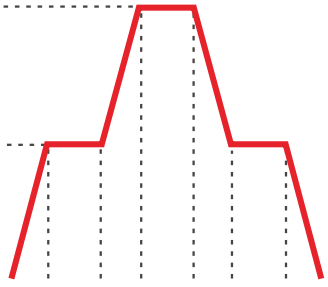
Sets the trend of the output voltage over time and its duration. Set the mode of the output waveform execution as required, LOOP, CONT, STEP.

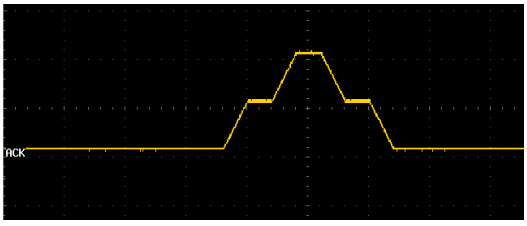




Slope File Format

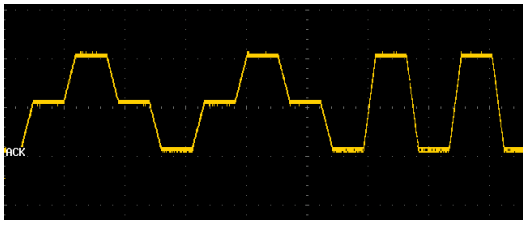
Support to set the slope of output voltage, achieve to slowly increase and drop of the output voltage. Set the mode of the output waveform execution as required, LOOP, CONT, STEP.





SEQUENCE Waveform Editing Function

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

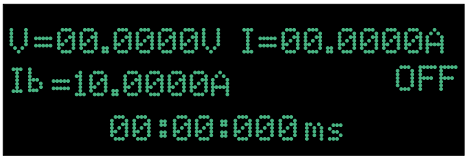


Measure Average Function

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

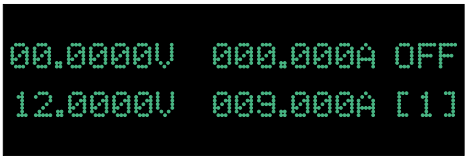
Current Counting Function

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



Quick Recall Function

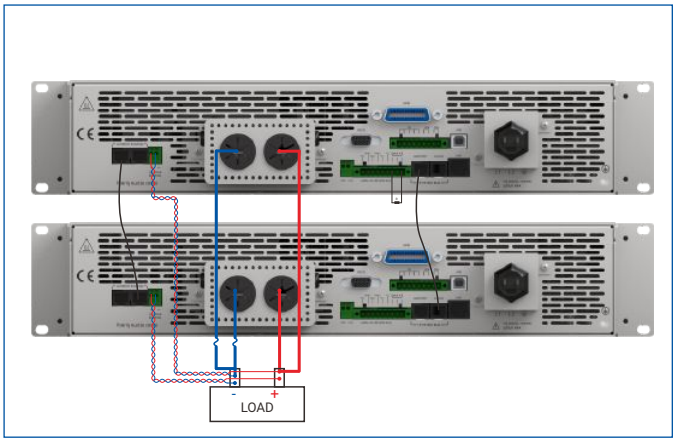
Support to recall the stored parameters directly by the numeric keys on the front panel.
Firstly, user stores the frequently used data in the power supply's memory, press the numeric key directly after entering the quick recall mode, can quick recall the datas which are stored in 【1】~【9】.



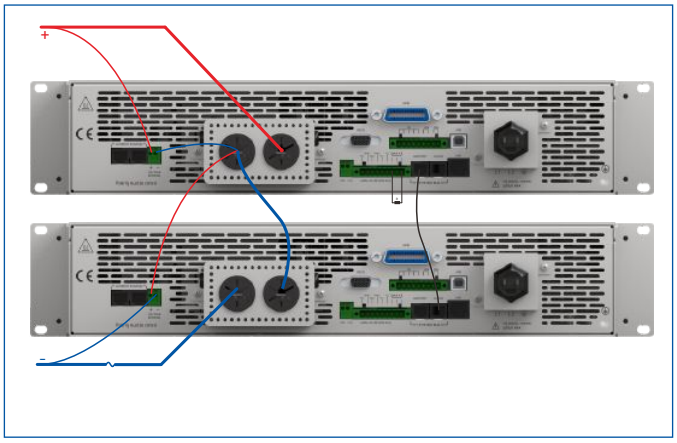
Master/Slave Mode

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

Parallel Connection

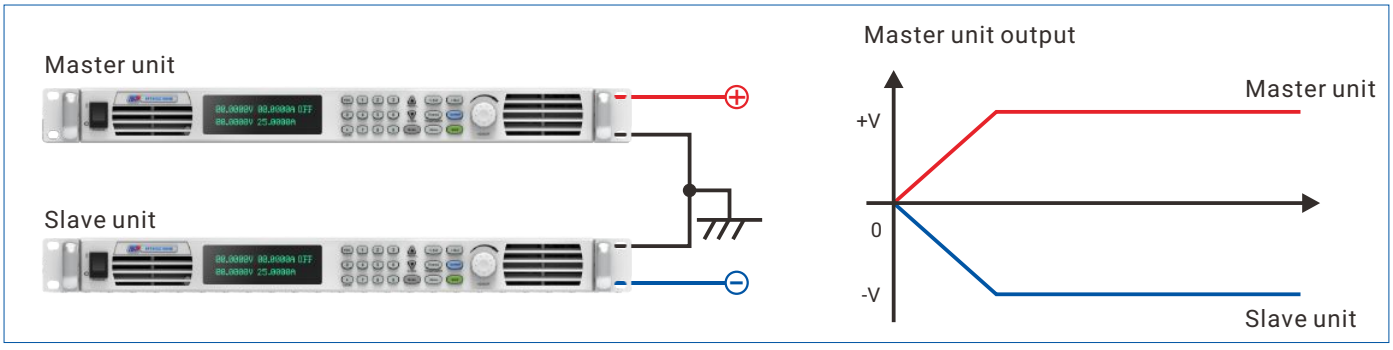


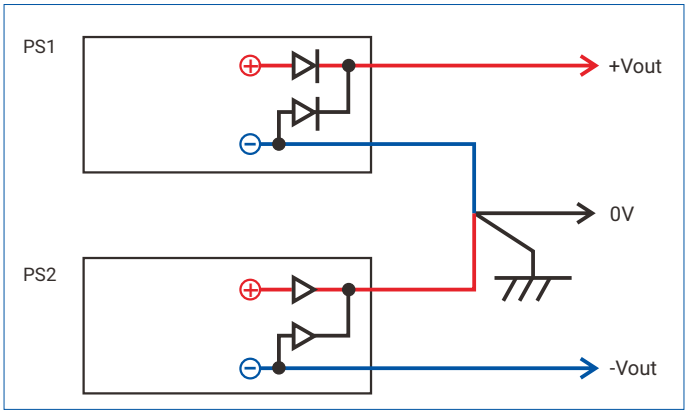
Series Connection

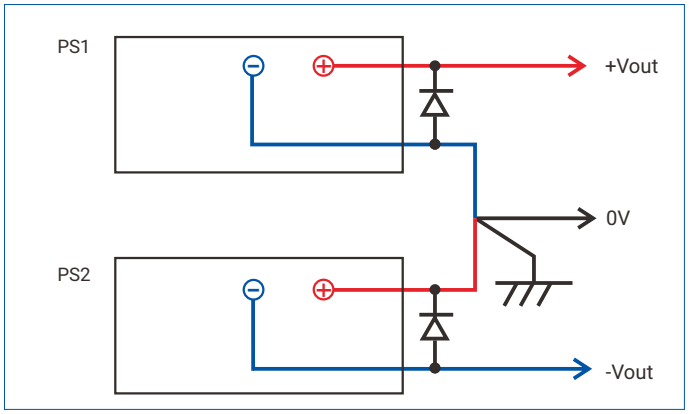


Positive / Negative Voltage Output Mode

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



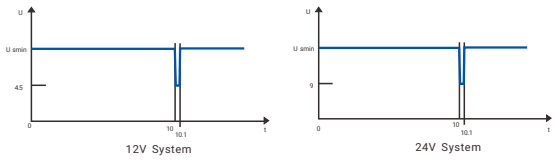
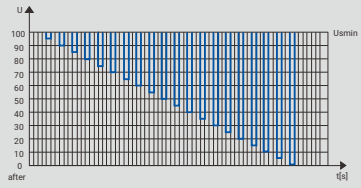
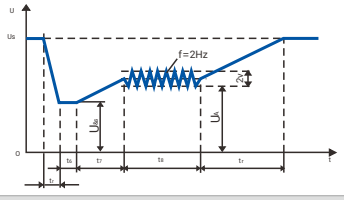
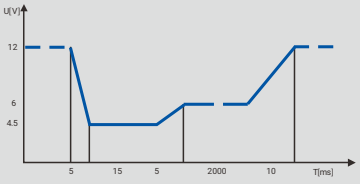




The power supply below 200A has been connected with anti reverse diode, so the external diode isn't needed in the actual connection, and the 200A power supply needs to connect the diode.

Built-in Standard Automobile Electric Test Waveform

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

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

Anti Reverse Irrigation/Power Sink Function

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

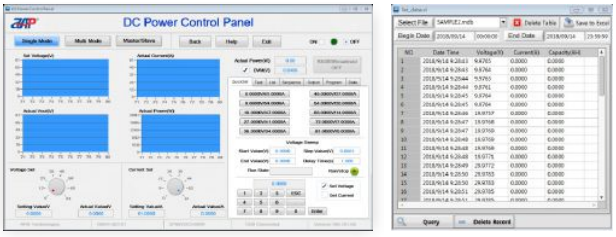
Meanwhile, this series power supply comes standard with short circuit copper sheet, When the test requires the power supply to absorb the spike generated by DUT to ensure the safety of the operation, the short-circuit copper piece can be connected, and the energy is absorbed by the output capacitor inside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

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

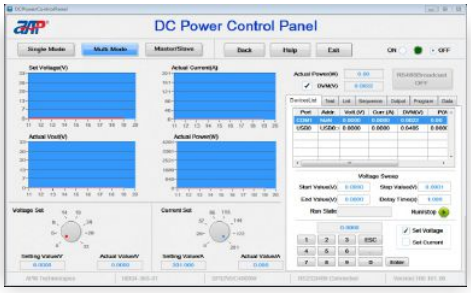
Monitoring Software

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

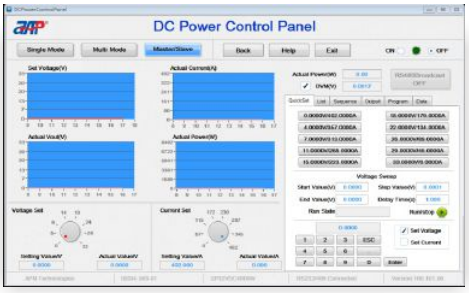
When the communication port has only one power supply connection, it enters the Single Mode interface. Includes the basic settings of voltage and current and measurement function, and List waveform editing/ saved test data function.



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



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



WebServer Function

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

600W in 1U

Model	SP20VDC600W	SP32VDC600W	SP40VDC600W	SP75VDC600W	SP150VDC600W	SP200VDC600W
Input						
Input Voltage	90~265VAC					
Input Frequency	47~63Hz					
Power Factor	>0.98					
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					
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 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 [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
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)
Line Regulation(Voltage)	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.02%+8mV	0.02%+8mV
Line Regulation(Current)	4mA	4mA	4mA	4mA	10mA	30mA
Voltage Temperature Coefficient [4]	100ppm/°C					
Current Temperature Coefficient [4]	150ppm/°C					
Remote Compensation	4V MAX					
Response (Voltage Increase)	≤10ms	≤12ms	≤10ms	≤10ms	≤25ms	≤30ms
Response (Voltage Drop)	≤150ms (no load) ≤20ms (full load)	≤150ms (no load) ≤20ms (full load)	≤150ms (no load) ≤20ms (full load)	≤160ms (no load) ≤20ms (full load)	≤400ms (no load) ≤32ms (full load)	≤600ms (no load) ≤30ms (full load)
Load Transient Recovery Time [5]	≤2ms	≤2ms	≤2ms	≤2ms	≤3ms	≤3ms
Command Response Time	50ms					
Efficiency (full load)	85%	86%	87%	88%	88%	87%
Other						
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK					
Anti Reverse Irrigation Protection	Yes					
Unit Weight	9.2kg	9.2kg	9.2kg	8.9kg	9.3kg	9.3kg
Shipping Weight	12kg	12kg	12kg	11.7kg	12.7kg	12.7kg
Dimensions(WxHxD)	423.0x44.0x447.0 mm					
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB					
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.					
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC					

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

[2] Vp-p@20MHz, Vrms@1.25MHz.
The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

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

[4] 0~40°C.

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

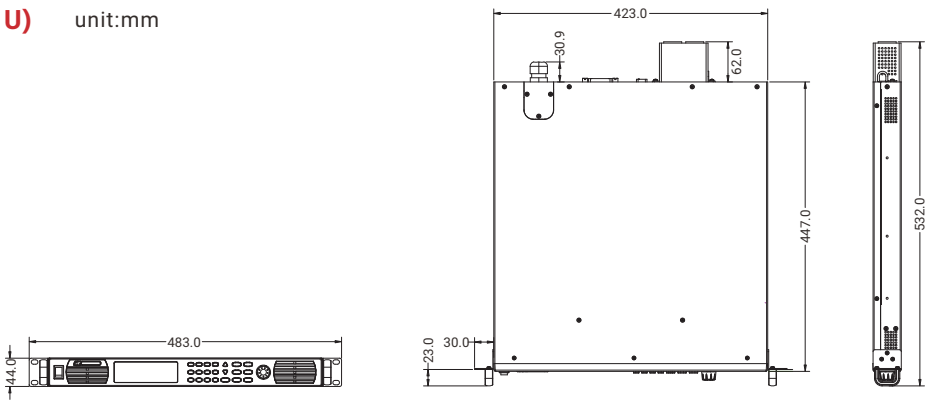
All specifications are subject to change without notice.

1000W in 1U

Model	SP20VDC1000W	SP32VDC1000W	SP40VDC1000W	SP75VDC1000W	SP150VDC1000W	SP200VDC1000W
Input						
Input Voltage	90~265VAC					
Input Frequency	47~63Hz					
Power Factor	>0.98					
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 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 [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
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)
Line Regulation(Voltage)	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.02%+8mV	0.02%+8mV
Line Regulation(Current)	4mA	4mA	4mA	4mA	10mA	30mA
Voltage Temperature Coefficient [4]	100ppm/°C					
Current Temperature Coefficient [4]	150ppm/°C					
Remote Compensation	4V MAX					
Response (Voltage Increase)	≤10ms	≤12ms	≤10ms	≤10ms	≤25ms	≤30ms
Response (Voltage Drop)	≤150ms (no load) ≤20ms (full load)	≤150ms (no load) ≤15ms (full load)	≤150ms (no load) ≤15ms (full load)	≤160ms (no load) ≤15ms (full load)	≤400ms (no load) ≤25ms (full load)	≤600ms (no load) ≤40ms (full load)
Load Transient Recovery Time [5]	≤2ms	≤2ms	≤2ms	≤2ms	≤3ms	≤3ms
Command Response Time	50ms					
Efficiency (full load)	85%	89%	89%	89%	89%	87%
Other						
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK					
Anti Reverse Irrigation Protection	Yes					
Unit Weight	9.2kg	9.2kg	9.2kg	8.9kg	9.3kg	9.3kg
Shipping Weight	12kg	12kg	12kg	11.7kg	12.7kg	12.7kg
Dimensions(WxHxD)	423.0x44.0x447.0 mm					
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB					
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.					
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC					

Dimension Drawing(1U)

unit:mm



1200W in 1U

Model	SP20VDC1200W	SP32VDC1200W	SP40VDC1200W	SP75VDC1200W	SP150VDC1200W	SP200VDC1200W
Input						
Input Voltage	90~265VAC					
Input Frequency	47~63Hz					
Power Factor	>0.98					
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					
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 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 [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
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)
Line Regulation(Voltage)	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.005%+1mV	0.02%+8mV	0.02%+8mV
Line Regulation(Current)	4mA	4mA	4mA	4mA	10mA	30mA
Voltage Temperature Coefficient [4]	100ppm/°C					
Current Temperature Coefficient [4]	150ppm/°C					
Remote Compensation	4V MAX					
Response (Voltage Increase)	≤10ms	≤10ms	≤10ms	≤10ms	≤25ms	≤30ms
Response (Voltage Drop)	≤150ms (no load) ≤12ms (full load)	≤150ms (no load) ≤12ms (full load)	≤150ms (no load) ≤12ms (full load)	≤160ms (no load) ≤12ms (full load)	≤400ms (no load) ≤21ms (full load)	≤600ms (no load) ≤36ms (full load)
Load Transient Recovery Time [5]	≤2ms	≤2ms	≤2ms	≤2ms	≤3ms	≤3ms
Command Response Time	50ms					
Efficiency (full load)	84%	84%	89%	90%	89%	90%
Other						
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK					
Anti Reverse Irrigation Protection	Yes					
Unit Weight	9.2kg	9.2kg	9.2kg	8.9kg	9.3kg	9.3kg
Shipping Weight	12kg	12kg	12kg	11.7kg	12.7kg	12.7kg
Dimensions(WxHxD)	423.0x44.0x447.0 mm					
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB					
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.					
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC					

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

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

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

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

[4] 0~40°C.

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

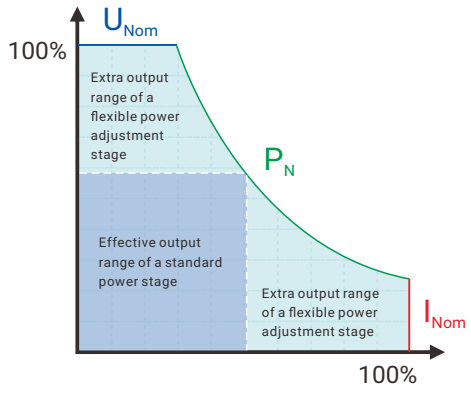
All specifications are subject to change without notice.

1500W in 1U

Model	SP75VDC1500W	SP150VDC1500W	SP200VDC1500W
Input			
Input Voltage	90~265VAC		
Input Frequency	47~63Hz		
Power Factor	>0.98		
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
Voltage Display Resolution	0.1mV	1mV	1mV
Current Display Resolution	0.2mA	0.2mA	0.1mA
Voltage Setting Accuracy [1]	0.05%+15mV	0.05%+15mV	0.05%+15mV
Current Setting Accuracy	0.1%+25mA	0.1%+10mA	0.1%+8mA
Voltage Measurement Accuracy [1]	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 [3]	25mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)	40mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.005%+2mV	0.02%+8mV	0.02%+8mV
Line Regulation(Current)	4mA	10mA	30mA
Voltage Temperature Coefficient [4]	100ppm/°C		
Current Temperature Coefficient [4]	150ppm/°C		
Remote Compensation	4V MAX		
Response (Voltage Increase)	≤10ms	≤25ms	≤30ms
Response (Voltage Drop)	≤160ms (no load) ≤10ms (full load)	≤400ms (no load) ≤18ms (full load)	≤600ms (no load) ≤30ms (full load)
Load Transient Recovery Time [5]	≤2ms	≤3ms	≤3ms
Command Response Time	50ms		
Efficiency (full load)	91%	90%	91%
Other			
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK		
Anti Reverse Irrigation Protection	Yes		
Unit Weight	8.9kg	9.3kg	9.3kg
Shipping Weight	11.7kg	12.7kg	12.7kg
Dimensions(WxHxD)	423.0x44.0x447.0 mm		
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB		
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.		
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC		

Constant Power Diagrammatic Drawing and Brief Introduction

Wide range output power supply provides wider voltage and current range, one unit function can replace several traditional rectangular power units so as to save cost and space for user; meanwhile, this series power supply can realize diversified operation through front panel, monitoring software or external control to meet various application requirements of the user.



1600W in 1U

Model	SP32VDC1600W	SP40VDC1600W
Input		
Input Voltage	90~265VAC	
Input Frequency	47~63Hz	
Power Factor	>0.98	
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 Setting Accuracy [1]	0.05%+15mV	
Current Setting Accuracy	0.1%+50mA	0.1%+40mA
Voltage Measurement Accuracy [1]	0.05%+15mV	0.05%+15mV
Current Measurement Accuracy	0.1%+50mA	0.1%+40mA
Voltage Ripple [2]	40mVp-p 6mVrms	
Current Ripple [3]	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	
Remote Compensation	4V MAX	
Response (Voltage Increase)	≤12ms	≤10ms
Response (Voltage Drop)	≤150ms (no load) ≤10ms (full load)	
Load Transient Recovery Time [5]	≤2ms	
Command Response Time	50ms	
Efficiency (full load)	89%	90%
Other		
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK	
Anti Reverse Irrigation Protection	Yes	
Unit Weight	9.2kg	
Shipping Weight	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.	
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC	

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

[2] Vp-p@20MHz, Vrms@1.25MHz.
The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

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

[4] 0~40°C.

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

All specifications are subject to change without notice.

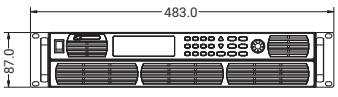
1000W in 2U(1)

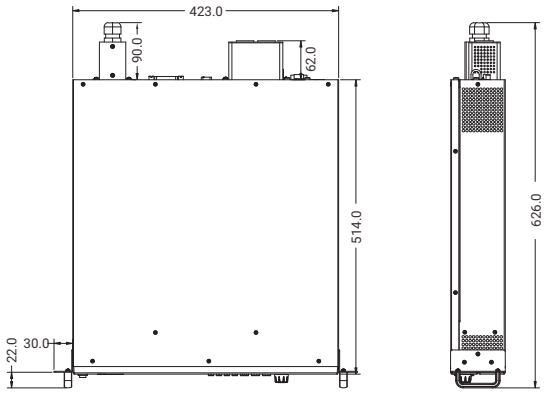
Model	SPS32VDC1000W	SPS40VDC1000W	SPS80VDC1000W	SPS120VDC1000W
Input				
Input Voltage	90~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98	>0.98	>0.97	>0.98
Output				
Output Voltage Range	0~32V	0~40V	0~80V	0~120V
Output Current Range	0~200A	0~120A	0~60A	0~40A
Output Power Range	0~1000W			
Voltage Load Regulation	30mV	15mV	15mV	15mV
Current Load Regulation	200mA	120mA	60mA	40mA
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	1mV
Current Display Resolution	1mA	1mA	0.2mA	0.1mA
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
Voltage 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 [3]	400mA (Full Range) 200mA (TYP Value)	150mA (Full Range) 20mA (TYP Value)	50mA (Full Range) 10mA (TYP Value)	60mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.01%+8mV	0.02%+8mV	0.01%+8mV	0.02%+8mV
Line Regulation(Current)	200mA	30mA	30mA	40mA
Voltage Temperature Coefficient [4]	100ppm/°C			
Current Temperature Coefficient [4]	150ppm/°C			
Remote Compensation	4V MAX	4V MAX	4V MAX	5V MAX
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			
Efficiency (full load)	85%	87%	89%	88%
Other				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	No(customers can purchase other accessories to achieve this function, please consult the salesrepresentative for details)	Yes	Yes	Yes
Unit Weight	14.7kg	14.7kg	13.2kg	13.2kg
Shipping Weight	18.7kg	18.7kg	16.8kg	16.8kg
Dimensions(WxHxD)	423.0x87.0x514.0 mm	423.0x87.0x514.0 mm	423.0x87.0x469.0 mm	423.0x87.0x469.0 mm
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB			
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.			
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC			

Dimension Drawing(2U)

unit:mm

Remark: Dimension of 32VDC, 40VDC, 600VDC, 800VDC
2U products: 423.0*87.0*514.0 mm





1000W in 2U(2)

Model	SPS150VDC1000W	SPS200VDC1000W	SPS600VDC1000W	SPS800VDC1000W
Input				
Input Voltage	90~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98			
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			
Voltage Load Regulation	15mV	15mV	30mV	200mV
Current Load Regulation	30mA	24mA	10mA	20mA
Voltage Display Resolution	1mV			
Current Display Resolution	0.1mA			
Voltage Setting Accuracy [1]	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 [1]	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Current Measurement Accuracy	0.1%+30mA	0.1%+24mA	0.1%+10mA	0.1%+7.5mA
Voltage Ripple [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)
Line Regulation(Voltage)	0.02%+8mV	0.02%+8mV	0.01%+30mV	0.01%+40mV
Line Regulation(Current)	30mA	30mA	15mA	15mA
Voltage Temperature Coefficient [4]	100ppm/°C			
Current Temperature Coefficient [4]	150ppm/°C			
Remote Compensation	5V MAX			
Response (Voltage Increase)	≤25ms	≤30ms	≤60ms	≤60ms
Response (Voltage Drop)	≤500ms (no load) ≤25ms (full load)	≤500ms (no load) ≤35ms (full load)	≤800ms (no load) ≤110ms (full load)	≤800ms (no load) ≤60ms (full load)
Load Transient Recovery Time [5]	≤2ms	≤2ms	≤3ms	≤3ms
Command Response Time	50ms			
Efficiency (full load)	88%	88%	86%	85%
Other				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	Yes			
Net Weight	13.2kg	14.7kg	13.2kg	13.2kg
Shipping Weight	16.8kg	18.7kg	16.8kg	16.8kg
Dimensions(WxHxD)	423.0x87.0x469.0 mm	423.0x87.0x469.0 mm	423.0x87.0x514.0 mm	423.0x87.0x514.0 mm
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB			
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.			
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC			

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

[2] Vp-p@20MHz, Vrms@1.25MHz.
The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

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

[4] 0~40°C.

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

All specifications are subject to change without notice.

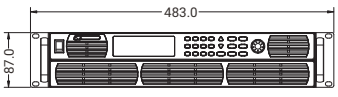
2000W in 2U(1)

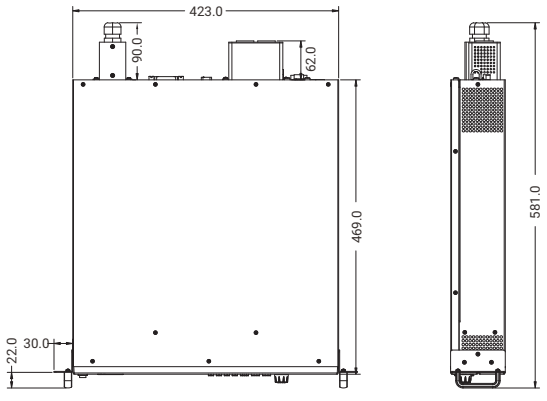
Model	SP32VDC2000W	SP40VDC2000W	SP80VDC2000W	SP120VDC2000W
Input				
Input Voltage	190~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98			
Output				
Output Voltage Range	0~32V	0~40V	0~80V	0~120V
Output Current Range	0~200A	0~120A	0~60A	0~40A
Output Power Range	0~2000W			
Voltage Load Regulation	30mV	15mV	15mV	15mV
Current Load Regulation	200mA	120mA	60mA	40mA
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	1mV
Current Display Resolution	1mA	1mA	0.2mA	0.1mA
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
Voltage 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 [3]	400mA (Full Range) 200mA (TYP Value)	150mA (Full Range) 20mA (TYP Value)	50mA (Full Range) 10mA (TYP Value)	60mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.01%+8mV	0.01%+8mV	0.01%+8mV	0.02%+8mV
Line Regulation(Current)	200mA	30mA	30mA	30mA
Voltage Temperature Coefficient [4]	100ppm/°C			
Current Temperature Coefficient [4]	150ppm/°C			
Remote Compensation	4V MAX	4V MAX	4V MAX	5V MAX
Response (Voltage Increase)	≤20ms (no load) ≤30ms (full load)	≤10ms	≤15ms	≤20ms
Response (Voltage Drop)	≤500ms (no load) ≤30ms (full load)	≤350ms (no load) ≤10ms (full load)	≤450ms (no load) ≤30ms (full load)	≤350ms (no load) ≤21ms (full load)
Load Transient Recovery Time [5]	≤2ms	≤2ms	≤2ms	≤3ms
Command Response Time	50ms			
Efficiency (full load)	91%	88%	89%	89%
Other				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	No(customers can purchase other accessories to achieve this function, please consult the salesrepresentative for details)	Yes	Yes	Yes
Unit Weight	14.7kg	14.7kg	13.2kg	13.2kg
Shipping Weight	18.7kg	18.7kg	16.8kg	16.8kg
Dimensions(WxHxD)	423.0x87.0x514.0 mm	423.0x87.0x514.0 mm	423.0x87.0x469.0 mm	423.0x87.0x469.0 mm
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB			
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.			
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC			

Dimension Drawing(2U)

unit:mm

Remark: Dimension of 75VDC, 80VDC, 120VDC, 150VDC, 200VDC
2U products: 423.0*87.0*469.0 mm





2000W in 2U(2)

Model	SP150VDC2000W	SP200VDC2000W	SP600VDC2000W	SP800VDC2000W
Input				
Input Voltage	190~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98			
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			
Voltage Load Regulation	15mV	15mV	30mV	200mV
Current Load Regulation	30mA	24mA	10mA	20mA
Voltage Display Resolution	1mV			
Current Display Resolution	0.1mA			
Voltage Setting Accuracy [1]	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 [1]	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Current Measurement Accuracy	0.1%+30mA	0.1%+24mA	0.1%+10mA	0.1%+7.5mA
Voltage Ripple [2]	40mVp-p 6mVrms	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)
Line Regulation(Voltage)	0.02%+8mV	0.02%+8mV	0.01%+30mV	0.01%+40mV
Line Regulation(Current)	30mA	30mA	15mA	20mA
Voltage Temperature Coefficient [4]	100ppm/°C			
Current Temperature Coefficient [4]	150ppm/°C			
Remote Compensation	5V MAX			
Response (Voltage Increase)	≤25ms	≤30ms	≤60ms	≤60ms
Response (Voltage Drop)	≤500ms (no load) ≤25ms (full load)	≤500ms (no load) ≤20ms (full load)	≤800ms (no load) ≤90ms (full load)	≤800ms (no load) ≤60ms (full load)
Load Transient Recovery Time [5]	≤3ms			
Command Response Time	50ms			
Efficiency (full load)	90%	90%	90%	91%
Other				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	Yes			
Unit Weight	13.2kg	13.2kg	14.7kg	14.7kg
Shipping Weight	16.8kg	16.8kg	18.7kg	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.			
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC			

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

[2] Vp-p@20MHz, Vrms@1.25MHz.
The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

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

[4] 0~40°C.

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

All specifications are subject to change without notice.

3000W in 2U(1)

Model	SP32VDC3000W	SP40VDC3000W	SP80VDC3000W	SP120VDC3000W
Input				
Input Voltage	190~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98			
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			
Voltage Load Regulation	30mV	15mV	15mV	15mV
Current Load Regulation	200mA	120mA	60mA	40mA
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	1mV
Current Display Resolution	1mA	1mA	0.2mA	0.1mA
Voltage 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
Voltage 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 [3]	400mA (Full Range) 200mA (TYP Value)	150mA (Full Range) 20mA (TYP Value)	50mA (Full Range) 10mA (TYP Value)	60mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.01%+8mV	0.01%+8mV	0.01%+8mV	0.02%+8mV
Line Regulation(Current)	200mA	30mA	30mA	30mA
Voltage Temperature Coefficient [4]	100ppm/°C			
Current Temperature Coefficient [4]	150ppm/°C			
Remote Compensation	4V MAX	4V MAX	4V MAX	5V MAX
Response (Voltage Increase)	≤20ms (no load) ≤20ms (full load)	≤10ms	≤15ms	≤20ms
Response (Voltage Drop)	≤500ms (no load) ≤25ms (full load)	≤350ms (no load) ≤10ms (full load)	≤450ms (no load) ≤30ms (full load)	≤350ms (no load) ≤21ms (full load)
Load Transient Recovery Time [5]	≤2ms			
Command Response Time	50ms			
Efficiency (full load)	91%	88%	91%	91%
Other				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	No(customers can purchase other accessories to achieve this function, please consult the salesrepresentative for details)	Yes	Yes	Yes
Unit Weight	14.7kg	14.7kg	13.2kg	13.2kg
Shipping Weight	18.7kg	18.7kg	16.8kg	16.8kg
Dimensions(WxHxD)	423.0x87.0x514.0 mm	423.0x87.0x514.0 mm	423.0x87.0x469.0 mm	423.0x87.0x469.0 mm
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB			
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.			
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC			

Foldback Protection

All of this programmable power supply series could provide Foldback protection. After the protection is turned on, the power supply will shut down the output when the output mode is converted. That is, when the power supply enters CV from CC or enters CC from CV, it can protect the tested object.

3000W in 2U(2)

Model	SP150VDC3000W	SP200VDC3000W	SP600VDC3000W	SP800VDC3000W
Input				
Input Voltage	190~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98			
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			
Voltage Setting Accuracy [1]	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 [1]	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Current Measurement Accuracy	0.1%+30mA	0.1%+24mA	0.1%+10mA	0.1%+7.5mA
Voltage Ripple [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)
Line Regulation(Voltage)	0.02%+8mV	0.02%+8mV	0.01%+30mV	0.01%+40mV
Line Regulation(Current)	30mA	30mA	15mA	20mA
Voltage Temperature Coefficient [4]	100ppm/°C			
Current Temperature Coefficient [4]	150ppm/°C			
Remote Compensation	5V MAX			
Response (Voltage Increase)	≤25ms	≤30ms	≤60ms	≤60ms
Response (Voltage Drop)	≤500ms (no load) ≤25ms (full load)	≤500ms (no load) ≤20ms (full load)	≤800ms (no load) ≤75ms (full load)	≤800ms (no load) ≤60ms (full load)
Load Transient Recovery Time [5]	≤2.5ms	≤3ms	≤3ms	≤3ms
Command Response Time	50ms			
Efficiency (full load)	92%	91%	91%	91%
Other				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	Yes			
Unit Weight	13.2kg	13.2kg	14.7kg	14.7kg
Shipping Weight	16.8kg	16.8kg	18.7kg	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.			
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC			

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

[2] Vp-p@20MHz, Vrms@1.25MHz.
The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

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

[4] 0~40°C.

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

All specifications are subject to change without notice.

4000W in 2U(1)

Model	SP32VDC4000W	SP40VDC4000W	SP75VDC4000W	SP120VDC4000W
Input				
Input Voltage	190~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98			
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			
Voltage Load Regulation	30mV	15mV	15mV	15mV
Current Load Regulation	200mA	120mA	60mA	40mA
Voltage Display Resolution	0.1mV	0.1mV	0.1mV	1mV
Current Display Resolution	1mA	1mA	0.1mA	0.1mA
Voltage Setting Accuracy [1]	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 [1]	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 10mVrms	40mVp-p 6mVrms	40mVp-p 8mVrms	80mVp-p 15mVrms
Current Ripple [3]	400mA (Full Range) 200mA (TYP Value)	150mA (Full Range) 20mA (TYP Value)	60mA (Full Range) 10mA (TYP Value)	60mA (Full Range) 10mA (TYP Value)
Line Regulation(Voltage)	0.01%+8mV	0.01%+8mV	0.01%+8mV	0.02%+8mV
Line Regulation(Current)	200mA	30mA	30mA	30mA
Voltage Temperature Coefficient [4]	100ppm/°C			
Current Temperature Coefficient [4]	150ppm/°C			
Remote Compensation	4V MAX	4V MAX	5V MAX	5V MAX
Response (Voltage Increase)	≤20ms (no load) ≤20ms (full load)	≤10ms	≤15ms	≤20ms
Response (Voltage Drop)	≤500ms (no load) ≤20ms (full load)	≤350ms (no load) ≤10ms (full load)	≤450ms (no load) ≤20ms (full load)	≤350ms (no load) ≤21ms (full load)
Load Transient Recovery Time [5]	≤2ms			
Command Response Time	50ms			
Efficiency (full load)	91%	91%	91%	92%
Other				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	No(customers can purchase other accessories to achieve this function, please consult the salesrepresentative for details)	Yes	Yes	Yes
Unit Weight	14.7kg	14.7kg	13.2kg	13.2kg
Shipping Weight	18.7kg	18.7kg	16.8kg	16.8kg
Dimensions(WxHxD)	423.0x87.0x514.0 mm	423.0x87.0x514.0 mm	423.0x87.0x469.0 mm	423.0x87.0x469.0 mm
Communication Modes	1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB			
Operating Environment	Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use.			
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC			

Labview Driver Support

All of this programmable power supply series supports the SCPI command, and provides customers with the communication Demo of RS232/RS485/USB/LAN and GPIB based on Labview.

Users can download it directly from APM website (http://enpps.apmtech.cn/) , which is convenient to use and saves the cost of software development.

4000W in 2U(2)

Model	SP150VDC4000W	SP200VDC4000W	SP600VDC4000W	SP800VDC4000W
Input				
Input Voltage	190~265VAC			
Input Frequency	47~63Hz			
Power Factor	>0.98			
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			
Voltage Load Regulation	15mV	25mV	30mV	200mV
Current Load Regulation	30mA	24mA	10mA	20mA
Voltage Display Resolution	1mV			
Current Display Resolution	0.1mA			
Voltage Setting Accuracy [1]	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 [1]	0.1%+15mV	0.1%+15mV	0.05%+150mV	0.05%+200mV
Current Measurement Accuracy	0.1%+30mA	0.1%+24mA	0.1%+10mA	0.1%+7.5mA
Voltage Ripple [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)
Line Regulation(Voltage)	0.02%+8mV	0.02%+8mV	0.01%+30mV	0.01%+40mV
Line Regulation(Current)	30mA	30mA	15mA	20mA
Voltage Temperature Coefficient [4]	100ppm/°C			
Current Temperature Coefficient [4]	150ppm/°C			
Remote Compensation	5V MAX			
Response (Voltage Increase)	≤25ms	≤30ms	≤60ms	≤60ms
Response (Voltage Drop)	≤500ms (no load) ≤25ms (full load)	≤500ms (no load) ≤20ms (full load)	≤800ms (no load) ≤60ms (full load)	≤800ms (no load) ≤60ms (full load)
Load Transient Recovery Time [5]	≤2.5ms	≤3ms	≤3ms	≤3ms
Command Response Time	50ms	50V	200V	250V
Efficiency (full load)	93%	92%	92%	92%
Other				
Protection Function	OVP/OCP/OTP/OPP/SCP/FOLDBACK			
Anti Reverse Irrigation Protection	Yes			
Unit Weight	13.2kg	13.2kg	14.7kg	14.7kg
Shipping Weight	16.8kg	16.8kg	18.7kg	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.			
Insulation	AC input <->DC output, 4242VDC, AC input <-> PE, 2121VDC			

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

[2] Vp-p@20MHz, Vrms@1.25MHz.
The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

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

[4] 0~40°C.

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

All specifications are subject to change without notice.

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

This series Wide-range High-power Programmable DC Power Supply adopts high frequency isolation and active PFC design, which makes it can achieve high efficiency at any output point. DSP and FPGA control circuit provides faster but stable internal data computing and response capability. An optional built-in electronic load enables the power supply to work as a two-quadrant power supply. Solar array simulation function provides a unique feature to simulate the output characteristics of a solar panel. Users can select built-in standard automotive power network voltage curves to do the DUT performance test directly according to the demand. Built-in smart 3-stage charging algorithm simulation which is suitable for commonly known types of batteries on the market. List and Step modes can be used for auto sequence output. Built-in RS232, RS485 and USB communication interfaces, LAN&GPIB or CAN communication card is optional.

(3U)6000W~18000W

(6U)24000W~36000W

Quick Selection :

Output Voltage	3U			6U		
	6000W	12000W	18000W	24000W	30000W	36000W
80VDC	200A	400A	600A	800A	1000A	1200A
165VDC	*	180A	*	360A	*	540A
250VDC	*	*	180A	*	*	*
360VDC	42.5A	85A	127.5A	170A	212.5A	255A
500VDC	32A	64A	96A	128A	160A	192A
750VDC	21A	42A	63A	84A	105A	126A
1000VDC	*	32A	*	64A	*	96A
1500VDC	*	21A	32A	42A	*	63A
2250VDC	*	*	21A	*	*	*

Features

- Large color touch screen with intuitive interface provides an excellent intuition operational experience.
- 3-phase input voltage meets worldwide power distribution regulation, AC mains 187~253Vac/340~460Vac for optional.
- Constant voltage (CV), constant current (CC) and constant power (CP) operation mode, CC or CV working priority setting.
- Adjustable voltage/current slew rate.
- DDS arbitrary function generator.*
- Solar panel I-V curve simulation function.*
- Smart 3-stage charging algorithm simulation.*
- Battery simulator function.*
- Continuous source & sink function, with APM DC E-load to expand loading capability (optional).
- List/ Step mode programming.
- TTL/Analog control and monitoring.
- Built-in standard automotive power network voltage curves.*
- Full protection: OVP, OCP, OPP and OTP protection.
- Supports master-slave mode, paralleling up to 16 units.
- Supports SCPI commands, provides web GUI function.

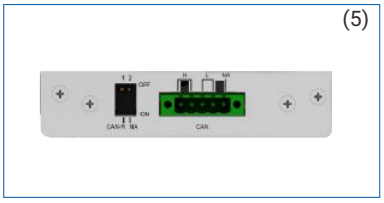
*Only professional version units support these functions.

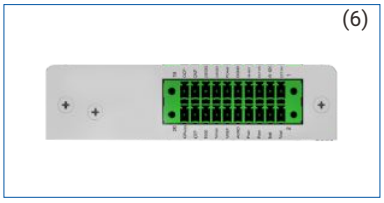
Supported Functions Professional Version Only

No.	Description	Application
1	DDS arbitary function generator	Includes a true function generator, built-in typical functions, supports complex waveforms creation, used for testing purposes in development and production
2	Solar panel I-V curve simulation function	Users can set the parameters to simulate I-V curve characteristic output
3	Smart 3-stage charging algorithm simulation	Commonly used charging curve simulation
4	Battery simulator function	Truly simulate the changes of internal resistance of battery in charging and discharging test.
5	Built-in standard automotive power network voltage curves	Users can recall the built-in standard curve to do the DUT performance test directly.

Optional Information

(1) US standard, input voltage range: 187~253Vac*
(2) European standard, input voltage range: 340~460Vac*
(3) Continuous source & sink function*
(4) GPIB & LAN communication card & cables
(5) CAN communication card
(6) TTL/Analog control card



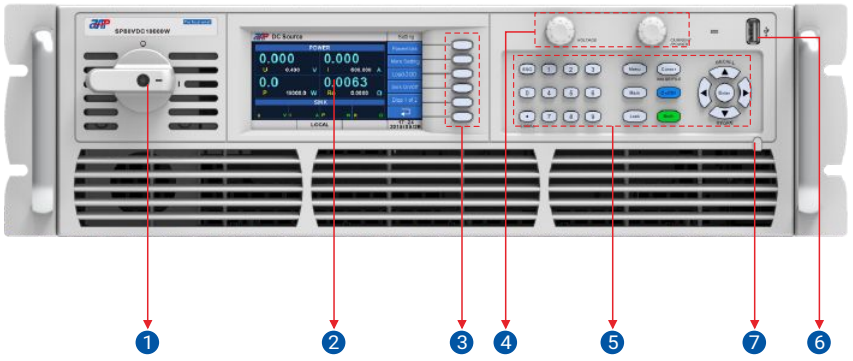


* These options must be specified at the time of order as they are installed at the factory prior to shipment.

Panel Introduction

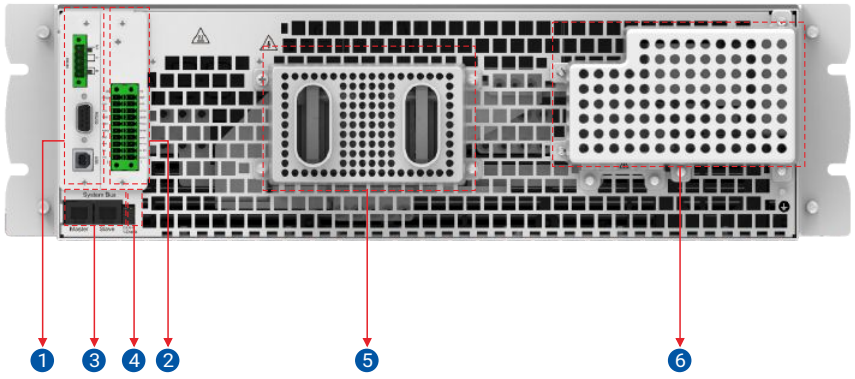
Front Panel Description

1. Power switch
2. Color touch screen
3. Selection soft keys
4. Voltage/Current & Power knob
5. Numberic and functional keys
6. USB port, for data transfers and firmware upgrading
7. Stylus



Rear Panel Description

1. RS485/RS232/USB communication interface (standard), LAN&GPIB communication interface (optional), CAN communication interface (optional)*
2. External TTL/Analog control interface.
3. System Bus, for master/slave system data transmission
4. Termination resistor CAN-R
5. DC output negative/positive terminal
6. AC mains input connector



* These interface option installs in place of the standard RS485/RS232/USB interfaces, occupies the same physical slot.

Function Introduction

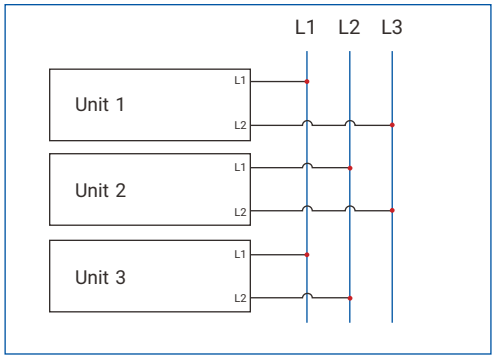
Graphical User Interface

The large color touch screen provides simple and fast operation for customers, real-time update of display output data and power status. The actual values are displayed with bigger characters, so they can be read from a large distance.

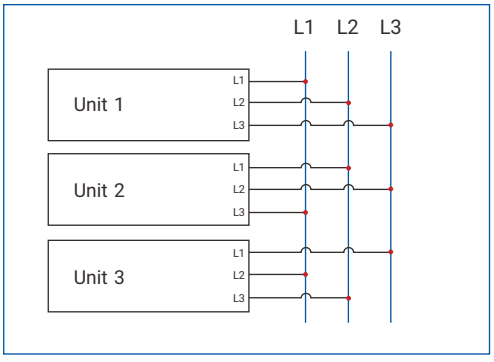
Wide Input Voltage Range & High Power Density

3-phase input voltage range 187~460Vac meets worldwide power distribution regulation. 36kW/6U high density, higher efficiency, lower ripple and fast response make it ideal for test requirements in different periods of different applications. This series power supply can have from one to three internal 6kW power blocks, each of which is connected across a separate phase of the 3-phase AC mains. The following figures illustrate how to install three 6kW units or three 12kW to obtain a balanced current draw on the 3-phase AC mains.

Phase balancing connection for three 6kW units

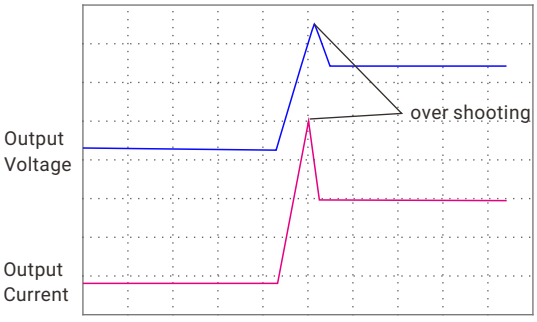


Phase balancing connection for three 12kW units

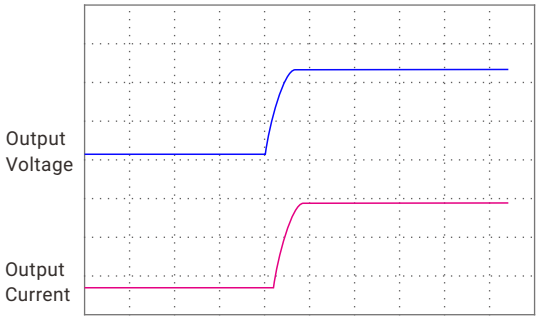


CC & CV Priority

This series power supply provides CC/CV priority function allows the user to select suitable mode correspond to test requirement, let the output be voltage high speed or current no overshoot mode. Below shows an application of CC priority to avoid current overshoot during LED test.



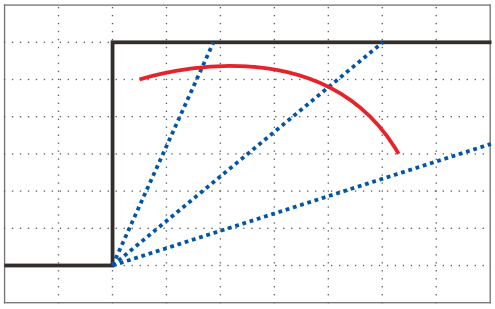
CV priority in LED test

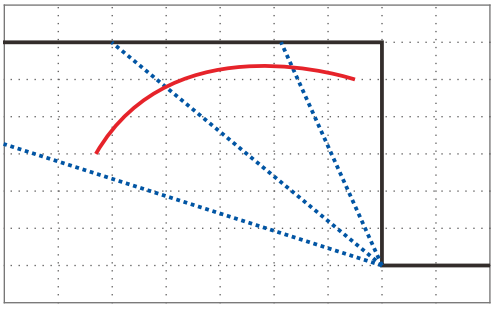


CC priority in LED test

Adjustable Voltage/Current Slew Rate

This series power supply provides adjustable rise and fall slew rate setting for voltage and current.

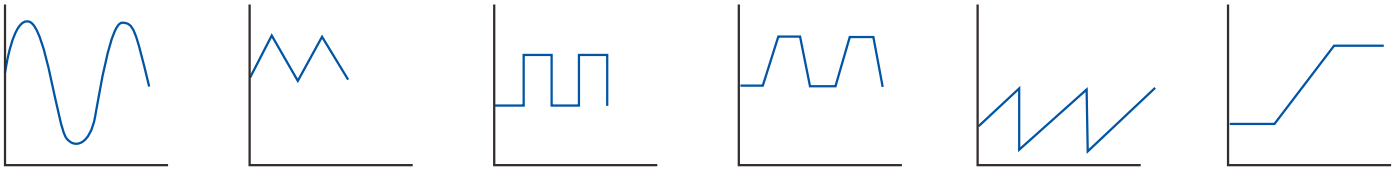




* Actual ramp down time may shift refer to load.

DDS Arbitrary Function Generator

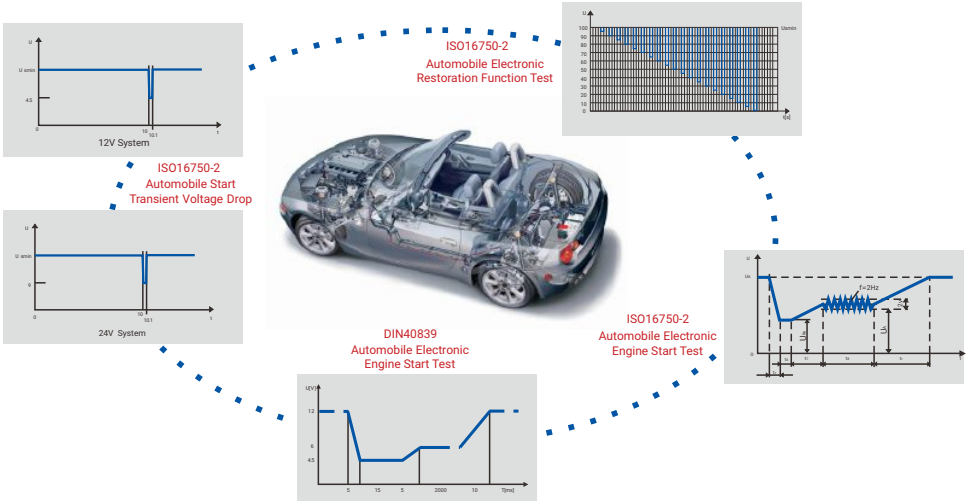
This series power supply includes a true function generator which can generate typical functions as displayed below, convenient for editing or directly recall. Additional to the standard functions, this arbitrary generator is accessible for the creation and execution of complex sets of functions, which is can be used for testing purposes in development and production.



Sine Triangle Rectangle Trapezoid Sawtooth Ramp

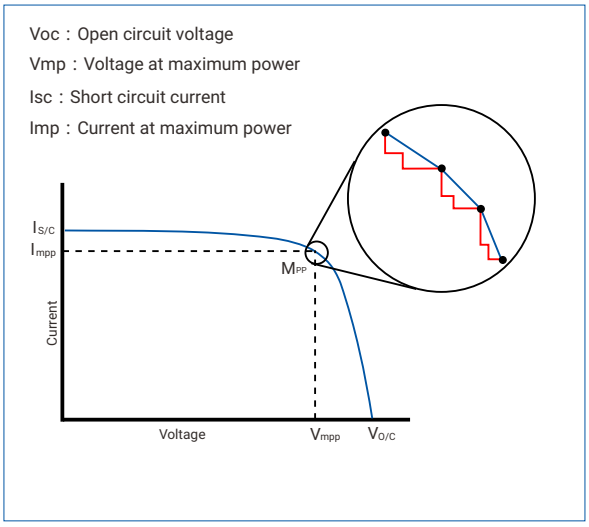
Built-in Standard Automotive Power Network Voltage Curves

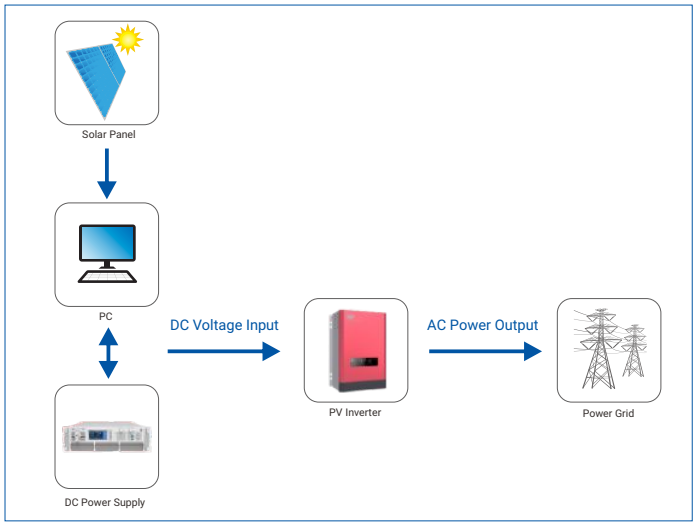
This series power supply has built-in German DIN40839 standard voltage curve for the automotive power network and the international standard ISO-16750-2 pulse waveform. The fast rise/fall response time together with arbitrary function generate ability make it can truly simulate the influence on the performance of automotive electronic equipment under different test conditions, is the preferred power testing instrument in the automotive electronics industry.



Solar Panel I-V Curve Simulation Function

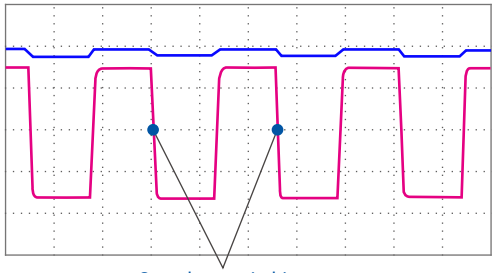
The power supply provides an unique feature to simulate the output characteristics of a solar array includes Curve Mode, User-defined Mode and SAS Mode. With Curve mode, only need to set four parameters to simulate the solar array I-V curve. With User-defined mode, user can shape an I-V curve by entering up to 4096 points to simulate dynamic cloud cover effect which is useful for MPPT performance evaluation on PV inverter device. With built-in SAS mode, user can set the parameters to simulate I-V curve characteristic output and generate reports.





Continuous Source & Sink Function (optional)

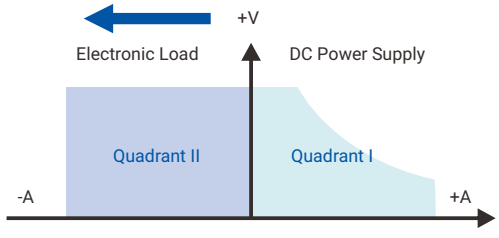
Additionally to the Source mode, this series power supply is equipped with electronic load, also called Sink mode, to absorb power, that enables it work as a two-quadrant power supply. The switchover between these two operating modes occurs without interruption and time loss, thus avoiding overshoot of voltage or current. As a power supply, CV, CC, CP modes are available. As an electronic load, CV, CC, CP and CR mode are available. Thus making it suitable for inductive load and capacitive load testing.



Seamless switching

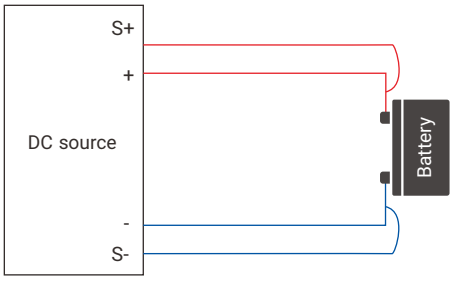
With APM DC E-load To Expand Loading Capability

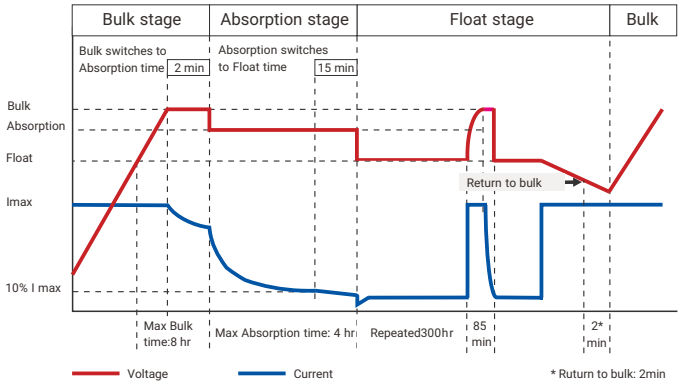
If a large fast current sinking capability is required, the user can choose APM programmable electric DC loads as well. A power supply can connect and control three DC loads at the same time through CAN communication to realize a rapid response system. Meeting demanding requirements of high power discharging test.



Smart 3-stage Charging Algorithm Simulation

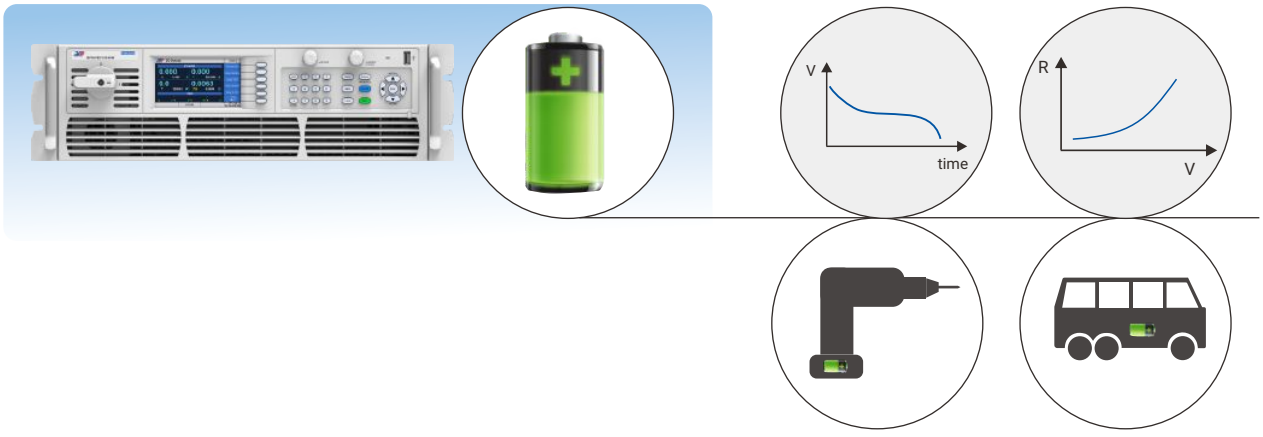
This series power supply adopts 3-stage charging algorithm, built-in charging curves which is suitable for the commonly known types of batteries on the market. Users can directly recall the default curves or change the switching conditions at different charging stage according to the test requirement. Through the internal design, it improved and optimized hardware improvements, the current passing from the battery to power supply will be less than 10mA at any battery voltage when turn off the power supply. Thus avoid battery capacity loss, even when there is no anti reverse irrigation equipment.





Battery Simulator Function

This series power supply built-in typical battery internal resistance curves and discharging curves can easily simulate battery behavior in real-case.



List/Program/Step Mode Programming

This series power supply provides List/Program/Step modes for output waveform programming. Users can edit the voltage/current value & the time of each step in advance and provide the power supply with a trigger signal. Then the preset sequences / waveform will be executed automatically according to the defined files. Sequence mode supports link between multiple files, the user can set the repeat times of each file and the total repeat times of the complete sequence file.

TTL/Analog Control and Monitoring

This series power supply provides TTL/Analog control and monitoring function, in this way the unit can be controlled and monitored easily by external instruments. The user can define the active level according to the actual requirement by themselves. The reserved port also can be used for the secondary development in the future.

SP-3U/6U Series Programmable DC Power Supply

MODEL		SP80VDC6000W	SP80VDC12000W	SP80VDC18000W
Input				
Voltage[1]		187~253VAC		
		340~460VAC		
Current[1]		3P208 L3-0, L1, L2-38A	3P208 L1-60A, L2,L3-38A	3P208 L1,L2,L3-60A
		3P400 L3-0, L1,L2-19A	3P400 L1-30A, L2,L3-19A	3P400 L1,L2,L3-30A
Frequency		45~65Hz		
Connection		2ph, PE	3ph, PE	3ph, PE
Fuse (Internal)[1]		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[1]		3P208 ~90.5%@80V, 3P208 ~86.5%@200A	3P208 ~90.5%@80V, 3P208 ~86.5%@400A	3P208 ~90.5%@80V, 3P208 ~86.5%@600A
		3P400 ~92.2%@80V, 3P400 ~87.8%@200A	3P400 ~92.2%@80V, 3P400 ~87.8%@400A	3P400 ~92.2%@80V, 3P400 ~87.8%@600A
Output				
Voltage Range		0~80V		
Current Range[2]		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%)	0~12600W(0~105%)	0~18900W(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[3]	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[4]	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[5]	Voltage	<180mVpp, <15mVrms	<288mVpp, <23mVrms	<320mVpp, <25mVrms
	Current	<100mArms	<200mArms	<300mArms
Remote Compensation	Voltage	5%Umax(4V)		
Sink Function				
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

MODEL	SP80VDC6000W	SP80VDC12000W	SP80VDC18000W
CC Accuracy	<0.2% Imax(200mA)	<0.2% Imax(400mA)	<0.2% Imax(600mA)
CV Resolution	<4mV		
CV Accuracy	<0.1% Umax(80mV)		
CP Resolution	0.5W	1W	1.5W
CP Accuracy	<0.5% Pmax(1675mW)	<0.5% Pmax(3300mW)	<0.5% Pmax(5000mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
General			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numberic keys, Rotary knod, 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		
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 [2]	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;
Mechanical			
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
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.

MODEL		SP80VDC24000W	SP80VDC30000W	SP80VDC36000W
Input				
Voltage[1]		200~253VAC		
		340~460VAC		
Current[1]		3P208 L3-60A , L1, L2-103A	3P208 L1-125A,L2,L3-103A	3P208 L1,L2,L3-125A
		3P400 L3-30A, L1,L2-49A	3P400 L1-63A,L2,L3-49A	3P400 L1,L2,L3-63A
Frequency		45~65Hz		
Connection		3ph, PE		
Fuse (Internal)[1]		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[1]		3P208 ~90.5%@80V, 3P208 ~86.5%@800A	3P208 ~90.5%@80V, 3P208 ~86.5%@1000A	3P208 ~90.5%@80V, 3P208 ~86.5%@1200A
		3P400 ~92.2%@80V, 3P400 ~87.8%@800A	3P400 ~92.2%@80V, 3P400 ~87.8%@1000A	3P400 ~92.2%@80V, 3P400 ~87.8%@1200A
Output				
Voltage Range		0~80V		
Current Range[2]		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%)	0~31500W(0~105%)	0~37800W(0~105%)
	Internal Resistance	0~3.0Ω	0~2.4Ω	0~2.0Ω
Accuracy	Voltage	<0.1% Umax(80mV)		
	Current	<0.2% Imax(1600mA)	<0.2% Imax(2000mA)	<0.2% Imax(2400mA)
	Power	<1%+120W	<1%+150W	<1%+180W
	Internal Resistance	R<2% Rmax, I<0.3% Imax		
Line Regulation	Voltage	<0.02% Umax(16mV)		
	Current	<0.05% Imax(400mA)	<0.05% Imax(500mA)	<0.05% Imax(600mA)
	Power	<0.05% Pmax		
Load Regulation[3]	Voltage	<0.05%Umax(40mV) @Rated Voltage, <0.1%Umax(80mV) @Rated Current		
	Current	<0.15% Imax(1200mA)	<0.15% Imax(1500mA)	<0.15% Imax(1800mA)
	Power	<0.75% Pmax		
Rise Time	Voltage	<15ms (No Load) <30ms (Full Load)		
Drop Time	Voltage	<850ms (No Load) <15ms (Full Load)		
Transient Response Time[4]	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% Umax(80mV)		
	Current	<0.2% Imax(1600mA)	<0.2% Imax(2000mA)	<0.2% Imax(2400mA)
	Power	<0.5% Pmax		
	Internal Resistance	<0.4% Rmax		
Ripple[5]	Voltage	<320mVpp, <25mVrms		
	Current	<360mArms	<450mArms	<540mArms
Remote Compensation	Voltage	5% Umax(4V)		
Sink Function				
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

MODEL	SP80VDC24000W	SP80VDC30000W	SP80VDC36000W
CC Accuracy	<0.2% Imax(800mA)	<0.2% Imax(1000mA)	<0.2% Imax(1200mA)
CV Resolution	<4mV		
CV Accuracy	<0.1% Umax(80mV)		
CP Resolution	2W	2.5W	3W
CP Accuracy	<0.5% Pmax(6500mW)	<0.5% Pmax(8000mW)	<0.5% Pmax(10000mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
General			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numberic keys, Rotary knod, 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		
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 [2]	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;
Mechanical			
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
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.

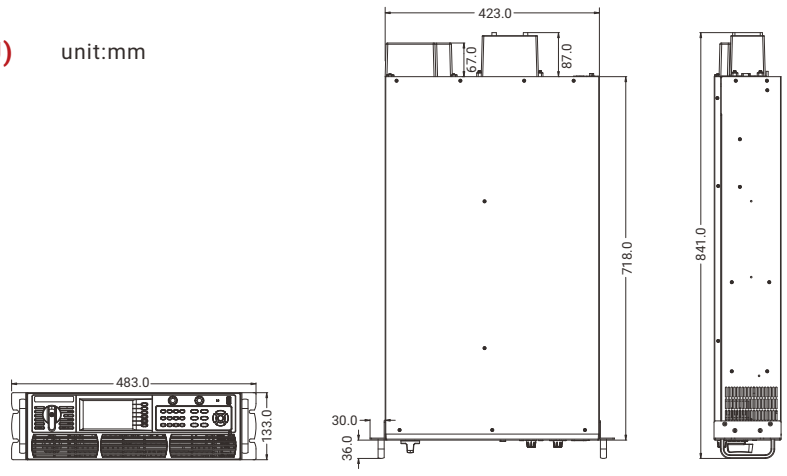
[5] Vrms @ 300kHz, Vpp @ 20MHz, Arms @ 300kHz.

MODEL		SP165VDC12000W	SP165VDC24000W	SP165VDC36000W
Input				
Voltage[1]		187~253VAC	200~253VAC	200~253VAC
		340~460VAC		
Current[1]		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)[1]		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[1]		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
Output				
Voltage Range		0~165V		
Current Range[2]		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%)	0~25200W(0~105%)	0~37800W(0~105%)
	Internal Resistance	0~27.5Ω	0~13.75Ω	0~9.167Ω
Accuracy	Voltage	<0.1% Umax(165mV)		
	Current	<0.2% Imax(360mA)	<0.2% Imax(720mA)	<0.2% Imax(1080mA)
	Power	<0.5%+60W	<1%+120W	<1%+180W
	Internal Resistance	R<2% Rmax, I<0.3% Imax		
Line Regulation	Voltage	<0.02% Umax(33mV)		
	Current	<0.05% Imax(90mA)	<0.05% Imax(180mA)	<0.05% Imax(270mA)
	Power	<0.05% Pmax		
Load Regulation[3]	Voltage	<0.05% Umax(82.5mV) @Rated Voltage, <0.1% Umax(165mV) @Rated Current		
	Current	<0.15% Imax(270mA)	<0.15% Imax(540mA)	<0.15% Imax(810mA)
	Power	<0.75% Pmax		
Rise Time	Voltage	<15ms (No Load) <30ms (Full Load)		
Drop Time	Voltage	<900ms (No Load) <15ms (Full Load)		
Transient Response Time[4]	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% Imax(360mA)	<0.2% Imax(720mA)	<0.2% Imax(1080mA)
	Power	<0.5% Pmax		
	Internal Resistance	<0.4% Rmax		
Ripple[5]	Voltage	<540mVpp, <50mVrms		
	Current	<100mArms	<200mArms	<300mArms
Remote Compensation	Voltage	2%Umax(3.3V)		
General				
Graphic Display		4.3” Color touch LCD		
Operation Key Feature		Soft keys, Numberic keys, Rotary knod, USB port for transfer and upgrading firmware		
Rack Mount Handles		Yes		
FAN		Temperature control		
Protection		OCP, OVP, OPP, OTP, HARD FAIL		

MODEL	SP165VDC12000W	SP165VDC24000W	SP165VDC36000W
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[2]	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;
Mechanical			
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
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.

Dimension Drawing(3U) unit:mm



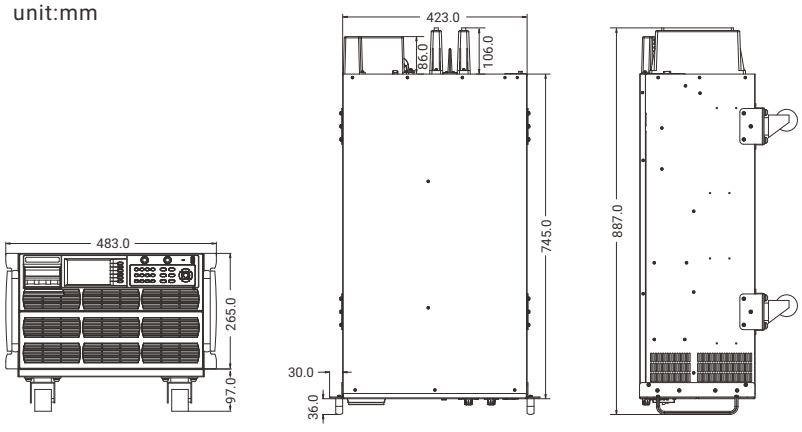
MODEL		SP250VDC18000W
Input		
Voltage[1]		190~253VAC
		340~460VAC
Current[1]		3P208 L1,L2,L3-60A
		3P400 L1,L2,L3-30A
Frequency		45~65Hz
Connection		3ph, PE
Fuse (Internal)[1]		T50A*2pcs
		T30A*2pcs
Power Factor		>0.99
Input Power		3P208 21.5KVAmax, 3P400 20.9KVAmax
Efficiency[1]		3P208 ~90.5%@250V, 3P208 ~85%@180A
		3P400 ~91.5%@250V, 3P400 ~85.5%@180A
Output		
Voltage Range		0~250V
Current Range[2]		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[3]	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[4]	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[5]	Voltage	<850mVpp, <75mVrms
	Current	<100mArms
Remote Compensation	Voltage	1%Umax(2.5V)
General		
Graphic Display		4.3" Color touch LCD
Operation Key Feature		Soft keys, Numberic keys, Rotary knod, USB port for transfer and upgrading firmware
Rack Mount Handles		Yes
FAN		Temperature control
Protection		OCP, OVP, OPP, OTP, HARD FAIL

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[2]	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.

Dimension Drawing(6U)

unit:mm



SP-3U/6U Series Programmable DC Power Supply

MODEL		SP360VDC6000W	SP360VDC12000W	SP360VDC18000W
Input				
Voltage[1]		187~253VAC		
		340~460VAC		
Current[1]		3P208 L3-0, L1,L2-38A	3P208 L1-60A, L2,L3-38A	3P208 L1,L2,L3-60A
		3P400 L3-0, L1,L2-19A	3P400 L1-30A, L2,L3-19A	3P400 L1,L2,L3-30A
Frequency		45~65Hz		
Connection		2ph, PE	3ph, PE	3ph, PE
Fuse (Internal)[1]		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[1]		3P208 ~92.2%@360V, 3P208 ~90.5%@42.5A	3P208 ~92.5%@360V, 3P208 ~90.5%@85A	3P208 ~92.5%@360V, 3P208 ~90.5%@127.5A
		3P400 ~92.5%@360V, 3P400 ~91%@42.5A	3P400 ~92.5%@360V, 3P400 ~91%@85A	3P400 ~92.5%@360V, 3P400 ~91%@127.5A
Output				
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%)	0~12600W(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%+90W	<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[2]	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[3]	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[4]	Voltage	<320mVpp, <55mVrms		
	Current	<21mArms	<43mArms	<64mArms
Remote Compensation	Voltage	3%Umax(10.8V)		
Sink Function				
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

MODEL	SP360VDC6000W	SP360VDC12000W	SP360VDC18000W
CC Accuracy	<0.2% Imax(50mA)	<0.2% Imax(100mA)	<0.2% Imax(150mA)
CV Resolution	<20mV		
CV Accuracy	<0.1% Umax(360mV)		
CP Resolution	0.5W	1.0W	1.5W
CP Accuracy	<0.5% Pmax(1625mW)	<0.5% Pmax(3250mW)	<0.5% Pmax(4875mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
General			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numberic keys, Rotary knod, 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		
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	2818VDC		
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; 71dB Max;	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	27kg	38kg	50kg
Shipping Weight	37kg	48kg	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] 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 Programmable DC Power Supply

MODEL		SP360VDC24000W	SP360VDC30000W	SP360VDC36000W
Input				
Voltage[1]		200~253VAC		
		340~460VAC		
Current[1]		3P208 L3-60A , L1, L2-103A	3P208 L1-125A,L2,L3-103A	3P208 L1,L2,L3-125A
		3P400 L3-30A, L1,L2-49A	3P400 L1-63A,L2,L3-49A	3P400 L1,L2,L3-63A
Frequency		45~65Hz		
Connection		3ph, PE		
Fuse (Internal)[1]		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[1]		3P208 ~92.2%@360V, 3P208 ~90.5%@170A	3P208 ~92.2%@360V, 3P208 ~90.5%@212.5A	3P208 ~92.2%@360V, 3P208 ~90.5%@255A
		3P400 ~92.5%@360V, 3P400 ~91%@170A	3P400 ~92.5%@360V, 3P400 ~91%@212.5A	3P400 ~92.5%@360V, 3P400 ~91%@255A
Output				
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%)	0~31500W(0~105%)	0~37800W(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	<1%+240W	<1%+360W
	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[2]	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[3]	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[4]	Voltage	<350mVpp, <60mVrms		
	Current	<85mArms	<106mArms	<128mArms
Remote Compensation	Voltage	3%Umax(10.8V)		
Sink Function				
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

MODEL	SP360VDC24000W	SP360VDC30000W	SP360VDC36000W
CC Accuracy	<0.2% Imax(200mA)	<0.2% Imax(250mA)	<0.2% Imax(300mA)
CV Resolution	<20mV		
CV Accuracy	<0.1% Umax(360mV)		
CP Resolution	2W	2.5W	3W
CP Accuracy	<0.5% Pmax(6500mW)	<0.5% Pmax(8125mW)	<0.5% Pmax(9750mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
General			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numberic keys, Rotary knod, 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		
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	2818VDC		
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	48dB Idle; 77dB Max;	48dB Idle; 80dB Max;	48dB Idle; 82dB Max;
Mechanical			
Dimensions(WxHxD)	423.0x265.0x745.0 mm		
Package Dimensions(WxHxD)	549.0×531.0×946.0 mm		
Unit Weight	75kg	86kg	97kg
Shipping Weight	101kg	112kg	123kg
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] 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.

MODEL		SP500VDC6000W	SP500VDC12000W	SP500VDC18000W
Input				
Voltage[1]		187~253VAC		
		340~460VAC		
Current[1]		3P208 L3-0, L1,L2-38A	3P208 L1-60A, L2,L3-38A	3P208 L1,L2,L3-60A
		3P400 L3-0, L1,L2-19A	3P400 L1-30A, L2,L3-19A	3P400 L1,L2,L3-30A
Frequency		45~65Hz		
Connection		2ph, PE	3ph, PE	3ph, PE
Fuse (Internal)[1]		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[1]		3P208 ~92.5%@500V, 3P208 ~91%@32A	3P208 ~92.5%@500V, 3P208 ~91%@64A	3P208 ~92.5%@500V, 3P208 ~91%@96A
		3P400 ~94%@500V, 3P400 ~92.5%@32A	3P400 ~94%@500V, 3P400 ~92.5%@64A	3P400 ~94%@500V, 3P400 ~92.5%@96A
Output				
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%)	0~12600W(0~105%)	0~18900W(0~105%)
	Internal Resistance	0~469Ω	0~235Ω	0~157Ω
Accuracy	Voltage	<0.1% Umax(500mV)		
	Current	<0.2% Imax(64mA)	<0.2% Imax(128mA)	<0.2% Imax(192mA)
	Power	<1%+60W	<1%+90W	<1%+120W
	Internal Resistance	R<2% Rmax, I<0.3% Imax		
Line Regulation	Voltage	<0.02% Umax(100mV)		
	Current	<0.05% Imax(16mA)	<0.05% Imax(32mA)	<0.05% Imax(48mA)
	Power	<0.05% Pmax		
Load Regulation[2]	Voltage	<0.05% Umax(250mV) @Rated Voltage, <0.1% Umax(500mV) @Rated Current		
	Current	<0.15% Imax(48mA)	<0.15% Imax(96mA)	<0.15% Imax(144mA)
	Power	<0.75% Pmax		
Rise Time	Voltage	<15ms (No Load) <80ms (Full Load)		
Drop Time	Voltage	<1500ms (No Load) <15ms (Full Load)		
Transient Response Time[3]	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% Imax(64mA)	<0.2% Imax(128mA)	<0.2% Imax(192mA)
	Power	<0.5% Pmax		
	Internal Resistance	<0.4% Rmax		
Ripple[4]	Voltage	<600mVpp, <150mVrms	<650mVpp, <160mVrms	<650mVpp, <160mVrms
	Current	<16mArms	<32mArms	<48mArms
Remote Compensation	Voltage	3%Umax(15V)		
Sink Function				
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

MODEL	SP500VDC6000W	SP500VDC12000W	SP500VDC18000W
CC Accuracy	<0.2% Imax(32mA)	<0.2% Imax(48mA)	<0.2% Imax(80mA)
CV Resolution	<4mV		
CV Accuracy	<0.1% Umax(500mV)		
CP Resolution	0.5W	1.0W	1.5W
CP Accuracy	<0.5% Pmax(1625mW)	<0.5% Pmax(3250mW)	<0.5% Pmax(4875mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
General			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numberic keys, Rotary knod, 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		
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	2818VDC		
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; 71dB Max;	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	27kg	38kg	50kg
Shipping Weight	37kg	48kg	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] 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 Programmable DC Power Supply

MODEL		SP500VDC24000W	SP500VDC30000W	SP500VDC36000W
Input				
Voltage[1]		200~253VAC		
		340~460VAC		
Current[1]		3P208 L1-60A, L2,L3-103A	3P208 L1-125A,L2,L3-103A	3P208 L1,L2,L3-125A
		3P400 L1-30A, L2,L3-49A	3P400 L1-63A,L2,L3-49A	3P400 L1,L2,L3-63A
Frequency		45~65Hz		
Connection		3ph, PE		
Fuse (Internal)[1]		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[1]		3P208 ~92.5%@500V, 3P208 ~91%@128A	3P208 ~92.5%@500V, 3P208 ~91%@160A	3P208 ~92.5%@500V, 3P208 ~91%@192A
		3P400 ~94%@500V, 3P400 ~92.5%@128A	3P400 ~94%@500V, 3P400 ~92.5%@160A	3P400 ~94%@500V, 3P400 ~92.5%@192A
Output				
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% Imax(256mA)	<0.2% Imax(320mA)	<0.2% Imax(384mA)
	Power	<1%+180W	<1%+240W	<1%+360W
	Internal Resistance	R<2% Rmax, I<0.3% Imax		
Line Regulation	Voltage	<0.02% Umax(100mV)		
	Current	<0.05% Imax(64mA)	<0.05% Imax(80mA)	<0.05% Imax(96mA)
	Power	<0.05% Pmax		
Load Regulation[2]	Voltage	<0.05% Umax(250mV) @Rated Voltage, <0.1% Umax(500mV) @Rated Current		
	Current	<0.15% Imax(192mA)	<0.15% Imax(240mA)	<0.15% Imax(288mA)
	Power	<0.75% Pmax		
Rise Time	Voltage	<15ms (No Load) <80ms (Full Load)		
Drop Time	Voltage	<1500ms (No Load) <15ms (Full Load)		
Transient Response Time[3]	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% Imax(256mA)	<0.2% Imax(320mA)	<0.2% Imax(384mA)
	Power	<0.5% Pmax		
	Internal Resistance	<0.4% Rmax		
Ripple[4]	Voltage	<650mVpp, <160mVrms		
	Current	<64mArms	<80mArms	<96mArms
Remote Compensation	Voltage	3% Umax(15V)		
Sink Function				
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

MODEL	SP500VDC24000W	SP500VDC30000W	SP500VDC36000W
CC Accuracy	<0.2% Imax(112mA)	<0.2% Imax(128mA)	<0.2% Imax(160mA)
CV Resolution	<4mV		
CV Accuracy	<0.1% Umax(500mV)		
CP Resolution	2W	2.5W	3W
CP Accuracy	<0.5% Pmax(6500mW)	<0.5% Pmax(8125mW)	<0.5% Pmax(9750mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
General			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numberic keys, Rotary knod, 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		
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	2818VDC		
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	48dB Idle; 77dB Max;	48dB Idle; 80dB Max;	48dB Idle; 82dB Max;
Mechanical			
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
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] 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.

MODEL		SP750VDC6000W	SP750VDC12000W	SP750VDC18000W
Input				
Voltage[1]		187~253VAC		
		340~460VAC		
Current[1]		3P208 L3-0, L1,L2-38A	3P208 L1-60A, L2,L3-38A	3P208 L1,L2,L3-60A
		3P400 L3-0, L1,L2-19A	3P400 L1-30A, L2,L3-19A	3P400 L1,L2,L3-30A
Frequency		45~65Hz		
Connection		2ph, PE	3ph, PE	3ph, PE
Fuse (Internal)[1]		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[1]		3P208 ~92.5%@750V, 3P208 ~91%@21A	3P208 ~92.5%@750V, 3P208 ~91%@42A	3P208 ~92.5%@750V, 3P208 ~91%@63A
		3P400 ~92.7%@750V, 3P400 ~92%@21A	3P400 ~92.7%@750V, 3P400 ~92%@42A	3P400 ~92.7%@750V, 3P400 ~92%@63A
Output				
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%)	0~12600W(0~105%)	0~18900W(0~105%)
	Internal Resistance	0~1072Ω	0~536Ω	0~358Ω
Accuracy	Voltage	<0.1% Umax(750mV)		
	Current	<0.2% Imax(42mA)	<0.2% Imax(84mA)	<0.2% Imax(126mA)
	Power	<1%+60W	<1%+90W	<1%+120W
	Internal Resistance	R<2% Rmax, I<0.3% Imax		
Line Regulation	Voltage	<0.02% Umax(150mV)		
	Current	<0.05% Imax(10.5mA)	<0.05% Imax(21mA)	<0.05% Imax(31.5mA)
	Power	<0.05% Pmax		
Load Regulation[2]	Voltage	<0.05% Umax(375mV) @Rated Voltage, <0.1% Umax(750mV) @Rated Current		
	Current	<0.15% Imax(31.5mA)	<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	<600ms (No Load) <20ms (Full Load)		
Transient Response Time[3]	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% Imax(42mA)	<0.2% Imax(84mA)	<0.2% Imax(126mA)
	Power	<0.5% Pmax		
	Internal Resistance	<0.4% Rmax		
Ripple[4]	Voltage	<900mVpp, <225mVrms	<1000mVpp, <250mVrms	<1000mVpp, <250mVrms
	Current	<11mArms	<22mArms	<33mArms
Remote Compensation	Voltage	3% Umax(22.5V)		
Sink Function				
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

MODEL	SP750VDC6000W	SP750VDC12000W	SP750VDC18000W
CC Accuracy	<0.2% Imax(20mA)	<0.2% Imax(30mA)	<0.2% Imax(50mA)
CV Resolution	<4mV		
CV Accuracy	<0.1% Umax(750mV)		
CP Resolution	0.5W	1.0W	1.5W
CP Accuracy	<0.5% Pmax(1625mW)	<0.5% Pmax(3250mW)	<0.5% Pmax(4875mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
General			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numberic keys, Rotary knod, 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		
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	4242VDC		
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; 71dB Max;	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	27kg	38kg	50kg
Shipping Weight	37kg	48kg	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] 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.

MODEL		SP750VDC24000W	SP750VDC30000W	SP750VDC36000W
Input				
Voltage[1]		200~253VAC		
		340~460VAC		
Current[1]		3P208 L3-60A, L1,L2-103A	3P208 L1-125A,L2,L3-103A	3P208 L1,L2,L3-125A
		3P400 L3-30A, L1,L2-49A	3P400 L1-63A,L2,L3-49A	3P400 L1,L2,L3-63A
Frequency		45~65Hz		
Connection		3ph, PE		
Fuse (Internal)[1]		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[1]		3P208 ~92.5%@750V, 3P208 ~91%@84A	3P208 ~92.5%@750V, 3P208 ~91%@105A	3P208 ~92.5%@750V, 3P208 ~91%@126A
		3P400 ~92.7%%@750V, 3P400 ~92%@84A	3P400 ~92.7%@750V, 3P400 ~92%@105A	3P400 ~92.7%@750V, 3P400 ~92%@126A
Output				
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% Imax(168mA)	<0.2% Imax(210mA)	<0.2% Imax(252mA)
	Power	<1%+180W	<1%+240W	<1%+360W
	Internal Resistance	R<2% Rmax, I<0.3% Imax		
Line Regulation	Voltage	<0.02% Umax(150mV)		
	Current	<0.05% Imax(42mA)	<0.05% Imax(52.5mA)	<0.05% Imax(63mA)
	Power	<0.05% Pmax		
Load Regulation[2]	Voltage	<0.05% Umax(375mV) @Rated Voltage, <0.1% Umax(750mV) @Rated Current		
	Current	<0.15% Imax(126mA)	<0.15% Imax(157.5mA)	<0.15% Imax(189mA)
	Power	<0.75%Pmax		
Rise Time	Voltage	<15ms (No Load) <80ms (Full Load)		
Drop Time	Voltage	<600ms (No Load) <20ms (Full Load)		
Transient Response Time[3]	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% Imax(168mA)	<0.2% Imax(210mA)	<0.2% Imax(252mA)
	Power	<0.5% Pmax		
	Internal Resistance	<0.4% Rmax		
Ripple[4]	Voltage	<1000mVpp, <250mVrms		
	Current	<44mArms	<55mArms	<66mArms
Remote Compensation	Voltage	3% Umax(22.5V)		
Sink Function				
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

MODEL	SP750VDC24000W	SP750VDC30000W	SP750VDC36000W
CC Accuracy	<0.2% Imax(70mA)	<0.2% Imax(80mA)	<0.2% Imax(90mA)
CV Resolution	<4mV		
CV Accuracy	<0.1% Umax(750mV)		
CP Resolution	2W	2.5W	3W
CP Accuracy	<0.5% Pmax(6000mW)	<0.5% Pmax(7500mW)	<0.5% Pmax(9000mW)
Slew Rate	0.01~2.5A/us		
Dynamic Mode	20ms~50s		
General			
Graphic Display	4.3" Color touch LCD		
Operation Key Feature	Soft keys, Numberic keys, Rotary knod, 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		
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	4242VDC		
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	48dB Idle; 77dB Max;	48dB Idle; 80dB Max;	48dB Idle; 82dB Max;
Mechanical			
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
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] 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 Programmable DC Power Supply

MODEL		SP1000VDC12000W	SP1000VDC24000W	SP1000VDC36000W
Input				
Voltage[1]		187~253VAC	200~253VAC	200~253VAC
		340~460VAC		
Current[1]		3P208 L1-60A, L2,L3-38A	3P208 L3-60A, L1,L2-103A	3P208 L1, L2,L3-103A
		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)[1]		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[1]		3P208 ~92%@1000V, 3P208 ~90%@32A	3P208 ~92%@1000V, 3P208 ~90%@64A	3P208 ~92%@1000V, 3P208 ~90%@96A
		3P400 ~93.5%@1000V, 3P400 ~92%@32A	3P400 ~93.5%@1000V, 3P400 ~92%@64A	3P400 ~93.5%@1000V, 3P400 ~92%@96A
Output				
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%)	0~100.8A(0-105%)
	Power	0~12600W(0~105%)	0~26400W(0~105%)	0~37800W(0~105%)
	Internal Resistance	0~937.5Ω	0~468.75Ω	0~312.5Ω
Accuracy	Voltage	<0.1% Umax(1000mV)		
	Current	<0.2% Imax(64mA)	<0.2% Imax(128mA)	<0.2% Imax(192mA)
	Power	<1%+90W	<1%+180W	<1%+360W
	Internal Resistance	R<2% Rmax, I<0.3% Imax		
Line Regulation	Voltage	<0.02% Umax(200mV)		
	Current	<0.05% Imax(16mA)	<0.05% Imax(32mA)	<0.05% Imax(48mA)
	Power	<0.05% Pmax		
Load Regulation[2]	Voltage	<0.05% Umax(500mV) @Rated Voltage, <0.08% Umax(800mV) @Rated Current		
	Current	<0.15% Imax(48mA)	<0.15% Imax(96mA)	<0.15% Imax(144mA)
	Power	<0.75%Pmax		
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[3]	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% Imax(64mA)	<0.2% Imax(128mA)	<0.2% Imax(192mA)
	Power	<0.5% Pmax		
	Internal Resistance	<0.4% Rmax		
Ripple[4]	Voltage	<1500mVpp, <320mVrms		
	Current	<22mArms	<26mArms	<48mArms
Remote Compensation	Voltage	3% Umax(30V)		
General				
Graphic Display		4.3" Color touch LCD		
Operation Key Feature		Soft keys, Numberic keys, Rotary knod, USB port for transfer and upgrading firmware		
Rack Mount Handles		Yes		
FAN		Temperature control		
Protection		OCP, OVP, OPP, OTP, HARD FAIL		

MODEL	SP1000VDC12000W	SP1000VDC24000W	SP1000VDC36000W
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	4242VDC		
Master/Slave Control			
Series Output	Not supported		
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;	48dB Idle; 80dB Max;	48dB Idle; 82dB Max;
Mechanical			
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
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] 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.

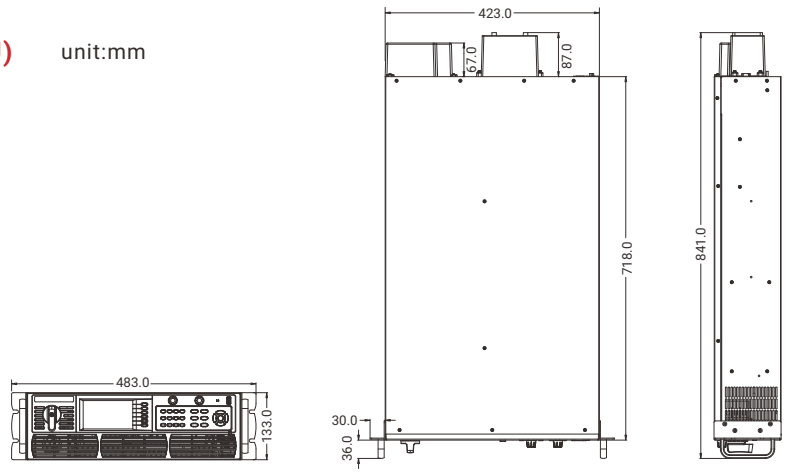
SP-3U/6U Series Programmable DC Power Supply

MODEL		SP1500VDC12000W	SP1500VDC18000W
Input			
Voltage[1]		187~253VAC	
		340~460VAC	
Current[1]		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)[1]		T50A*2pcs	
		T25A*2pcs	T30A*2pcs
Power Factor		>0.99	
Input Power		3P208 13.8KVAmax, 3P400 13.4KVAmax	3P208 20.5KVAmax, 3P400 19.9KVAmax
Efficiency[1]		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
Output			
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%)	0~18900W(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	<0.5%+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[2]	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[3]	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[4]	Voltage	<2500mVpp, <600mVrms	<1950mVpp, <650mVrms
	Current	<11mArms	<22mArms
Remote Compensation	Voltage	3% Umax(45V)	
General			
Graphic Display		4.3” Color touch LCD	
Operation Key Feature		Soft keys, Numberic keys, Rotary knod, USB port for transfer and upgrading firmware	
Rack Mount Handles		Yes	
FAN		Temperature control	
Protection		OCP, OVP, OPP, OTP, HARD FAIL	

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.

Dimension Drawing(3U) unit:mm



SP-3U/6U Series Programmable DC Power Supply

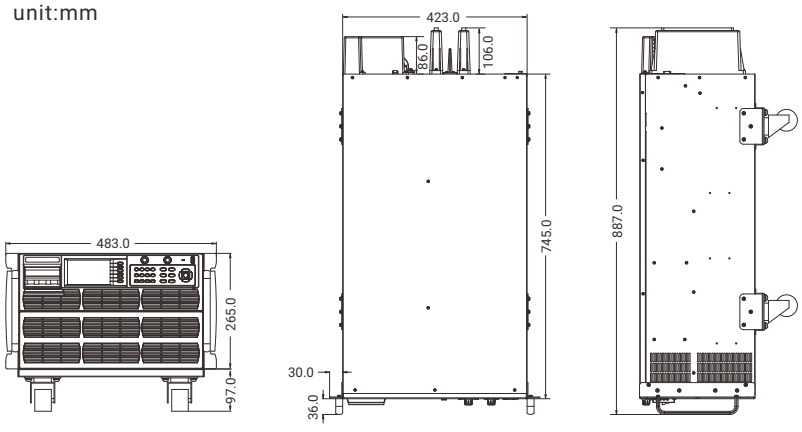
MODEL		SP1500VDC24000W	SP1500VDC36000W
Input			
Voltage[1]		200~253VAC	
		340~460VAC	
Current[1]		3P208 L1-60A, L2,L3-103A	3P208 L1,L2,L3-125A
		3P400 L1-30A, L2,L3-49A	3P400 L1,L2,L3-63A
Frequency		45~65Hz	
Connection		3ph, PE	
Fuse (Internal)[1]		T50A*2pcs	
		T25A*2pcs	
Power Factor		>0.99	
Input Power		3P208 27.6KVAmax, 3P400 26.8KVAmax	3P208 40.2KVAmax, 3P400 39.0KVAmax
Efficiency[1]		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
Output			
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%)	0~37800W(0-105%)
	Internal Resistance	0~1071Ω	0~714Ω
Accuracy	Voltage	<0.1% Umax(1.5V)	
	Current	<0.2% Imax(84mA)	<0.2% Imax(126mA)
	Power	<1%+180W	<1%+360W
	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[2]	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[3]	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[4]	Voltage	<2500mVpp, <600mVrms	
	Current	<22mArms	<33mArms
Remote Compensation	Voltage	3% Umax(45V)	
General			
Graphic Display		4.3" Color touch LCD	
Operation Key Feature		Soft keys, Numberic keys, Rotary knod, USB port for transfer and upgrading firmware	
Rack Mount Handles		Yes	
FAN		Temperature control	
Protection		OCP, OVP, OPP, OTP, HARD FAIL	

MODEL	SP1500VDC24000W	SP1500VDC36000W
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	Not supported	
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	48dB Idle; 80dB Max;	48dB Idle; 82dB Max;
Mechanical		
Dimensions(WxHxD)	423.0x265.0x745.0 mm	
Package Dimensions(WxHxD)	549.0x531.0x946.0 mm	
Unit Weight	75kg	97kg
Shipping Weight	101kg	123kg
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.

Dimension Drawing(6U)

unit:mm



MODEL		SP2250VDC18000W
Input		
Voltage[1]		187~253VAC
		340~460VAC
Current[1]		3P208 L1,L2,L3-60A
		3P400 L1,L2,L3-30A
Frequency		45~65Hz
Connection		3ph, PE
Fuse (Internal)[1]		T50A*2pcs
		T25A*2pcs
Power Factor		>0.99
Input Power		3P208 20.1KVAmax, 3P400 19.5KVAmax
Efficiency[1]		3P208 ~92%@2250V, 3P208 ~90.5%@21A
		3P400 ~92.5%@2250V, 3P400 ~91.5%@21A
Output		
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[2]	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[3]	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[4]	Voltage	<3200mVpp, <750mVrms
	Current	<11mArms
Remote Compensation	Voltage	3% Umax(67.5V)
General		
Graphic Display		4.3” Color touch LCD
Operation Key Feature		Soft keys, Numberic keys, Rotary knod, USB port for transfer and upgrading firmware
Rack Mount Handles		Yes
FAN		Temperature control
Protection		OCP, OVP, OPP, OTP, HARD FAIL

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
Master/Slave Control	
Series Output	Not supported
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; 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, 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.

SPS Series DC Power Supply System

Built-in voltage and current measurement function could provide wider range voltage and current combination. Single unit could cover range from 12KW to 40KW. Power rang could reach to 2000A and voltage range could reach to 1200V. DC source system can fulfill different kinds of DC power applications. Users can set the output voltage, current arbitrarily. Measure all kinds of features and display on VFD. At the meanwhile, power source provide multi standard interface, simplify and accelerate test development.

Features

- With accurate voltage and current measurement capability.
- Coded knobs, multifunctional keyboard.
- Standard RS232/LAN/RS485/USB interface, GPIB is optional.
- Remote sensing to compensate for voltage drop in load leads.
- Support CV and CC automatically switch.
- Function of editing List waveform.
- Use SCPI commands.
- CE certified.
- OVP/OCP/OPP/OTP/SCP.

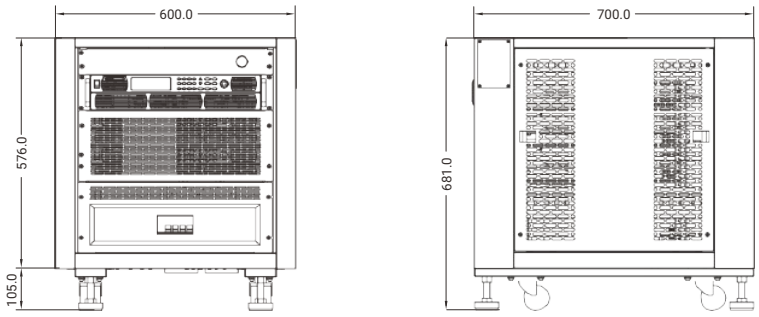
Quick Selection:

Output Voltage	13U Cabinet		19U Cabinet			27U Cabinet			
	2 Parallel	3 Parallel	4 Parallel	5 Parallel	6 Parallel	7 Parallel	8 Parallel	9 Parallel	10 Parallel
	8KW	12KW	16KW	20KW	24KW	28KW	32KW	36KW	40KW
32VDC	400A	600A	800A	1000A	1200A	1400A	1600A	1800A	2000A
40VDC	240A	360A	480A	600A	720A	840A	960A	1080A	1200A
75VDC	120A	180A	240A	300A	360A	420A	480A	540A	600A
120VDC	80A	120A	160A	200A	240A	280A	320A	360A	400A
150VDC	60A	90A	120A	150A	180A	210A	240A	270A	300A
200VDC	48A	72A	96A	120A	144A	168A	192A	216A	240A
600VDC	20A	30A	40A	50A	60A	70A	80A	90A	100A
800VDC	15A	22.5A	30A	37.5A	45A	52.5A	60A	67.5A	75A
Output Voltage	**6KW**	**9KW**	**12KW**	**15KW**	**18KW**	**21KW**	**24KW**	**27KW**	**30KW**
80VDC	120A	180A	240A	300A	360A	420A	480A	540A	600A
Output Current	**13U Cabinet**		**19U Cabinet**			**27U Cabinet**			
	2 Series	3 Series	4 Series	5 Series	6 Series	7 Series	8 Series	9 Series	10 Series
	8KW	12KW	16KW	20KW	24KW	28KW	32KW	36KW	40KW
200A	64V	96V	128V	160V	192V	224V	256V	288V	320V
120A	80V	120V	160V	200V	240V	280V	320V	360V	400V
60A	150V	225V	300V	375V	450V	525V	600V	675V	750V
40A	240V	360V	480V	600V	720V	840V	960V	1080V	1200V
30A	300V	450V	600V	750V	900V	1050V	1200V	*	*
24A	400V	600V	800V	1000V	1200V	*	*	*	*
10A	1200V	*	*	*	*	*	*	*	*
Output Current	**6KW**	**9KW**	**12KW**	**15KW**	**18KW**	**21KW**	**24KW**	**27KW**	**30KW**
60A	80V	240V	320V	400V	480V	560V	640V	720V	800V

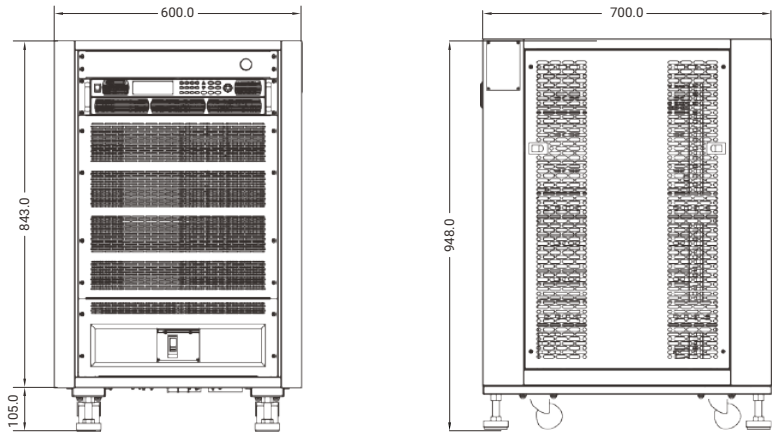
* This formula is the standard cabinet for SP-2U model; it is available to select cabinet with different specification according to exact situation.

Dimension Drawing

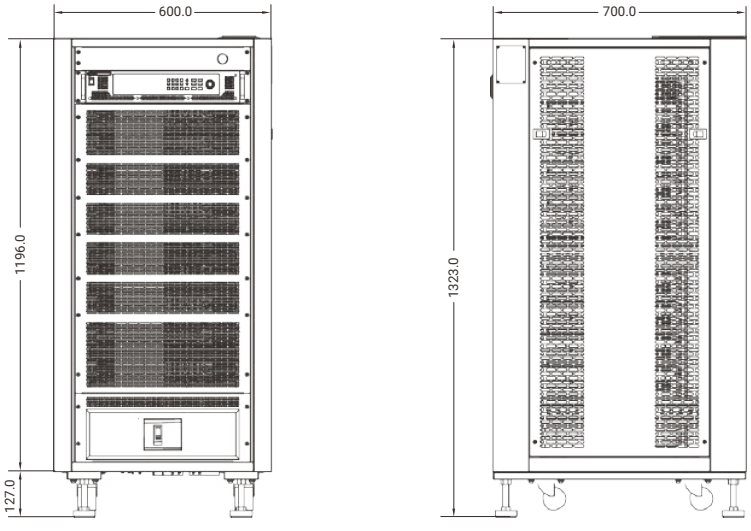
Dimension Drawing(13U) unit:mm



Dimension Drawing(19U) unit:mm



Dimension Drawing(27U) unit:mm



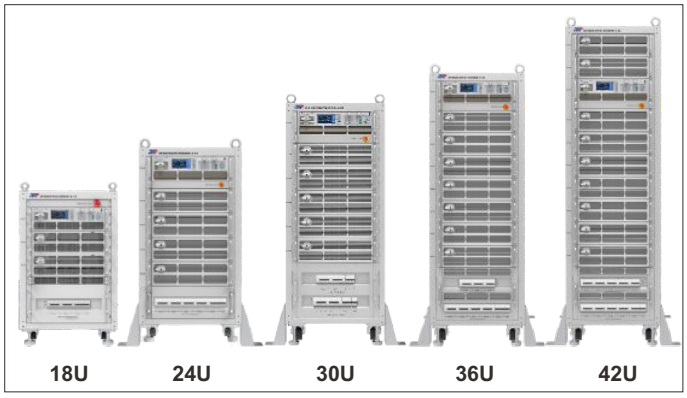
SPS-M/A Series DC Power Supply System

The SPS-M/A Series DC Power Supply System supports two series cabinets based on the control mode : SPSM and SPSA. The maximum output voltage and current of a single cabinet is up to 2250V and 3000A respectively. Output power of a single cabinet is up to 180kW. Support master-slave configuration to increase the output capacity to 576kW.

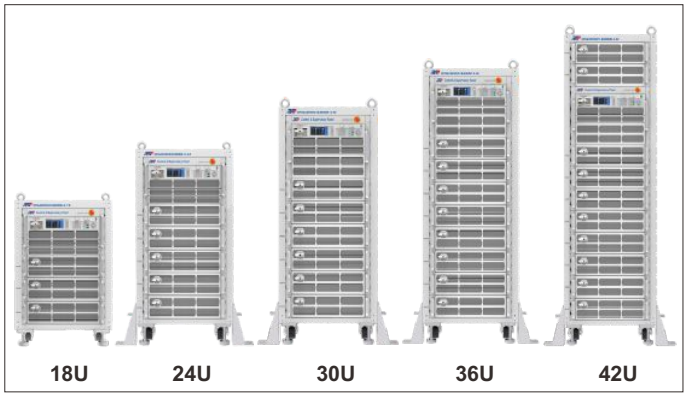
SPSM series cabinets use world famous circuit breaker to control the input of each power module inside. After power on, the specified 3U or 6U height power supply will be configured as a Master to control all of the slave units.

CSP is the Master in SPSA series cabinets, which is equipped with a PDU (Power Distribution Unit) and a CSP (Control & Supervisory Panel). The PDU consolidate microprocessor and management of hundreds of thousand VA AC mains in a 5U/8U height chassis. The CSP will display the input and output parameters of this system. The touchpanel provides a complete, intuitive user interface for users to easily manage all configuration, setup and update. Full protection designs prevent potential injury.

Manual Type



Automatic Type



Quick Selection:

Output Voltage	18U Cabinet		24U Cabinet		30U Cabinet	36U Cabinet		42U Cabinet	
	2 Parallel	3 Parallel	4 Parallel	5 Parallel	6 Parallel	7 Parallel	8 Parallel	9 Parallel	10 Parallel
80VDC	36KW	54KW	72KW	90KW	108KW	126KW	144KW	162KW	180KW
	1200A	1800A	2400A	3000A	3000A	3000A	3000A	3000A	3000A
165VDC	24KW	36KW	48KW	60KW	72KW	84KW	96KW	108KW	120KW
	360A	540A	720A	900A	1080A	1260A	1440A	1620A	1800A
250VDC	36KW	54KW	72KW	90KW	108KW	126KW	144KW	162KW	180KW
	360A	540A	720A	900A	1080A	1260A	1440A	1620A	1800A
360VDC	36KW	54KW	72KW	90KW	108KW	126KW	144KW	162KW	180KW
	255A	382.5A	510A	637.5A	765A	892.5A	1020A	1147.5A	1275A
500VDC	36KW	54KW	72KW	90KW	108KW	126KW	144KW	162KW	180KW
	192A	288A	384A	480A	576A	672A	768A	864A	960A
750VDC	36KW	54KW	72KW	90KW	108KW	126KW	144KW	162KW	180KW
	126A	189A	252A	315A	378A	441A	504A	567A	630A
1000VDC	24KW	36KW	48KW	60KW	72KW	84KW	96KW	108KW	120KW
	64A	96A	128A	160A	192A	224A	256A	288A	320A
1500VDC	36KW	54KW	72KW	90KW	108KW	126KW	144KW	162KW	180KW
	64A	96A	128A	160A	192A	224A	256A	288A	320A
2250VDC	36KW	54KW	72KW	90KW	108KW	126KW	144KW	162KW	180KW
	42A	63A	84A	105A	126A	147A	168A	189A	210A

* Above cabinets are formed with 3U height DC power supplies. Different height cabinets can be connected in parallel to a 576kW system. Please contact APM sales representative for details.

System Configuration

SPSM Series Cabinets					
Cabinet Height	18U	24U	30U	36U	42U
Capacity for Power Supplies	9U	15U	18U	24U	30U
Capacity (3U height unit)	3	4~5	4~6	7~8	9~10
Capacity (6U height unit)	1	2	3	4	5
PDU Height	4U	4U	7U	7U	7U
EMS Panel Height	1U	1U	1U	1U	1U
Cabinet Frame	2U	2U	2U	2U	2U
Wiring Height	2U	2U	2U	2U	2U

SPSA Series Cabinets					
Cabinet Height	18U	24U	30U	36U	42U
Capacity for Power Supplies	9U	15U	18U	24U	30U
Capacity (3U height unit)	3	4~5	4~6	7~8	9~10
Capacity (6U height unit)	1	2	3	4	5
CSP Height	5U	5U	8U	8U	8U
Cabinet Frame	2U	2U	2U	2U	2U
Wiring Height	2U	2U	2U	2U	2U

Note: PDU or CSP will be equipped based on the connected DC power supplies.

Optional Information

(1) US standard, input voltage range: 187~253Vac*

(2) European standard, input voltage range: 340~460Vac*

(3) Continuous source & sink function*

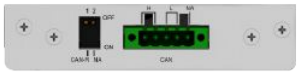
(4) GPIB & LAN communication card & cables

(5) CAN communication card

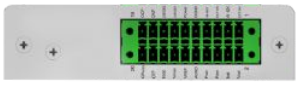
(6) TTL/Analog control card

(4)

(5)



(6)



* These options must be specified at the time of order as they are installed at the factory prior to shipment.

SPS-M/A Series DC Power Supply System

Features

- Large color touch screen, rotary knob and keys provide an excellent operational experience.
- 3-phase input voltage meets worldwide power distribution regulation, AC mains 187~253Vac/340~460Vac for optional.
- Constant voltage (CV), constant current (CC) and constant power (CP) operation mode, CC or CV working priority setting.
- Adjustable voltage/current slew rate.
- Smart 3-stage charging algorithm simulation.
- Full protection: OVP, OCP, OPP and OTP protection.
- Equipped with Emergency Stop, physically off all managed DC power supplies at once.
- Back door with protect switch, safe to the operator.
- List/ Step mode programming.
- Standard RS232/RS485/USB interface, optional LAN & GPIB interface, optional CAN interface.
- SCPI compatible, provide web GUI function.

SPSA Series Advantage

- CSP5/CSP8*, connect with 5units /10 units 3U height DC power supply or 2units /5 units 6U height DC power supply.
- Built-in power meter, to monitor the AC mains parameters such as V, A, Frequency, Power and PF.
- Support efficiency calculation and electrical quantities recording.
- Built-in Timer, allows to set output running time.
- Easy to enable the output of each power supply from the touch screen, sequence On/Off DC power supplies.
- Display the output parameters of each DC power supply in the same system.
- PDU significantly simplifies the wiring for DC power system.
- Use-defined AC input protection parameters such as OVP, UVP, OFP, UFP, OCP and Phase loss.
- Provide web GUI function to monitor & control the CSP via Ethernet.

* Even the same model CSP may be configured differently, which is based on the connected DC power supplies.

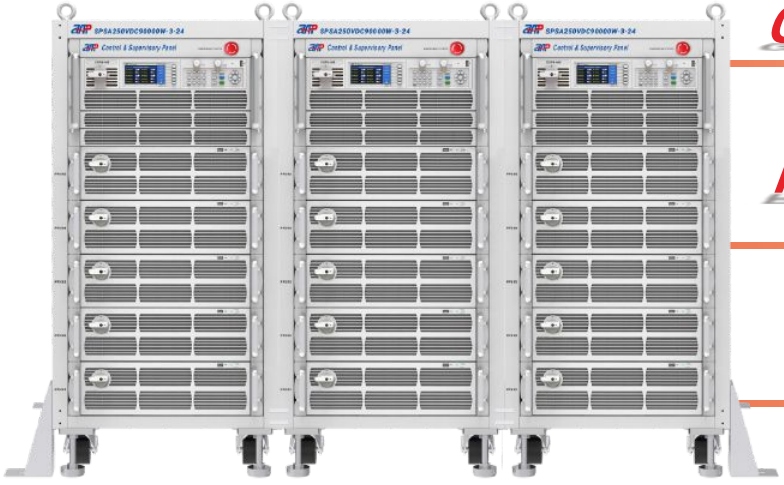
Connecting the cabinet

1. The cabinets can be connected in parallel in order to increase output power.

- Maximum 16 units 3U height same model DC power supplies or 6U height same model DC power supplies can be connected via the bus.
- 16 units each with a power of 18kW are connected together to a 288kW system.
- 16 units each with a power of 36kW are connected together to a 576kW system.

2. Different height cabinets can be connected in parallel.

- Use parallel bars to simplify the connection between multiple rack cabinets.
- Realized the gapless connection between multiple rack cabinets.



GAPLESS connection

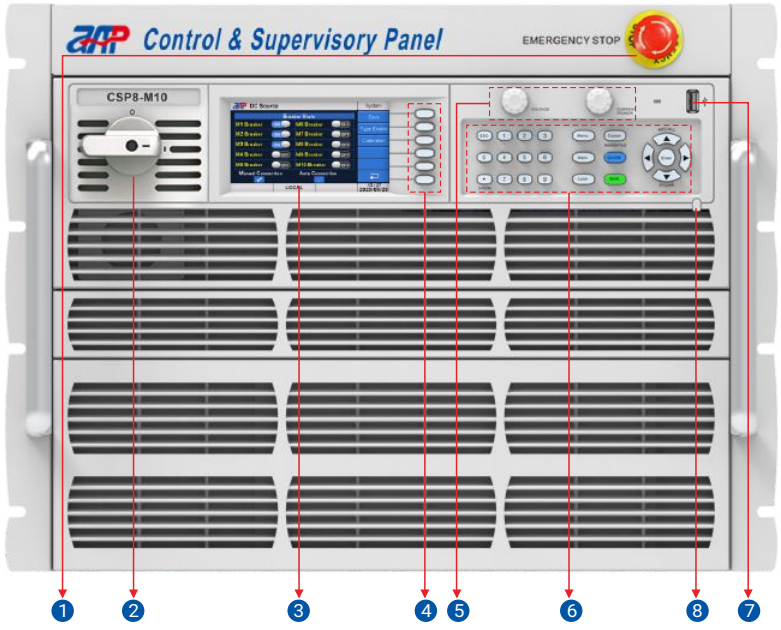
FLEXIBLE ASSEMBLY and disassembly

Up to **576kW**

CSP Panel Introduction

Front Panel Description

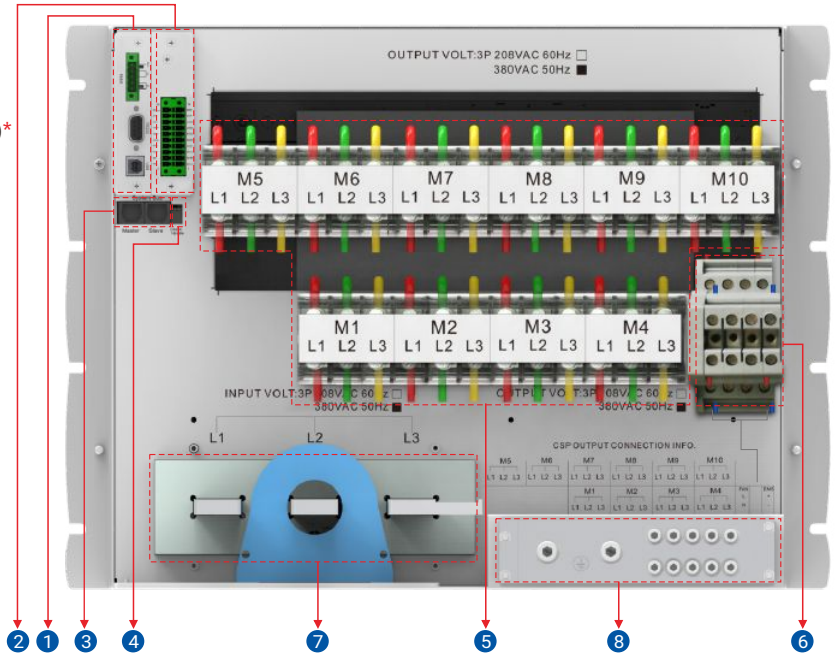
1. Emergency Stop, physically off all managed DC power supplies at once.
2. CSP power switch
3. Color touch screen
4. Selection soft keys
5. Voltage/Current & Power knob
6. Numberic and functional keys
7. USB port, for data transfers and firmware upgrading
8. Stylus



Rear Panel Description

1. RS485/RS232/USB communication interface (standard), LAN&GPIB communication interface (optional), CAN communication interface (optional)*
2. External TTL/Analog control interface.
3. System Bus, for master/slave system data transmission
4. Termination resistor CAN-R
5. PDU AC output terminals to each DC power supply
6. FAN & EMS AC input terminals
7. PDU AC input terminals
8. Protective earth (ground) terminals

* These interface option installs in place of the standard RS485/RS232/USB interfaces, occupies the same physical slot.

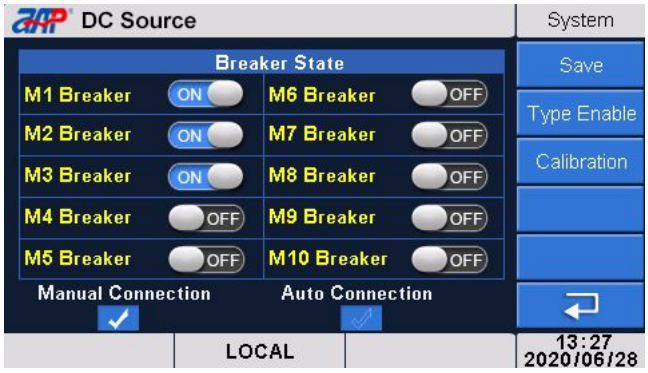


Displays of CSP

CSP provides below menus which allows user to control and monitor the power supply system via front panel.

System

Master-slave system configuration page.

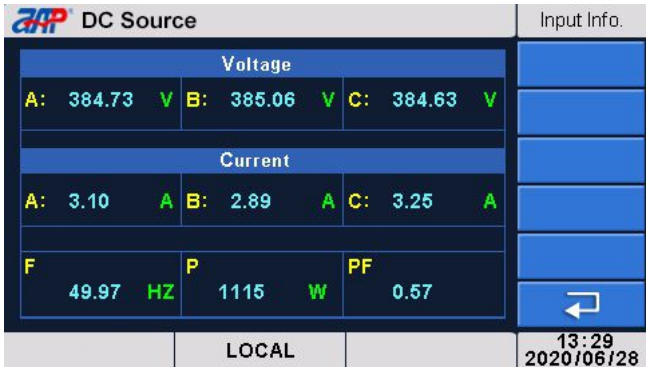


Submodule

DC output parameters reading page.

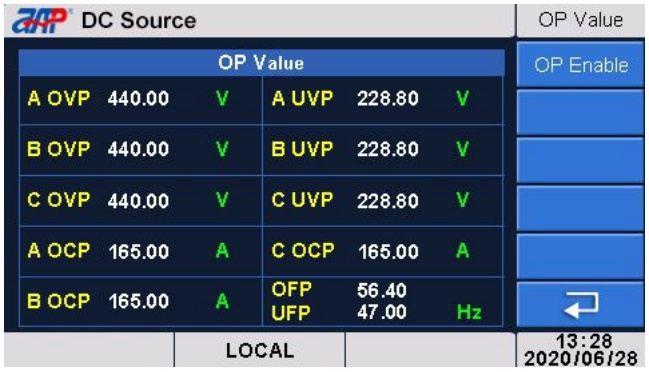
Input Info.

AC input parameters measurement page.



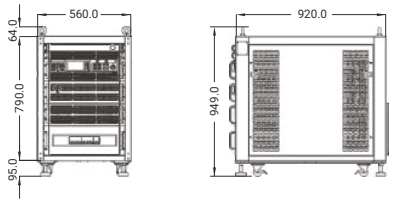
OP Value

AC input protection parameters setting page.

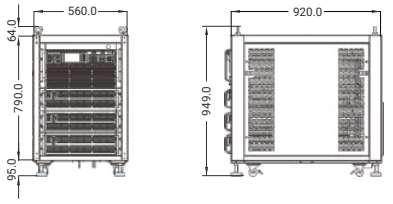


Dimension Drawing

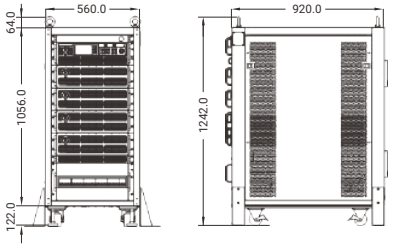
Dimension Drawing(18U Manual Models) unit:mm



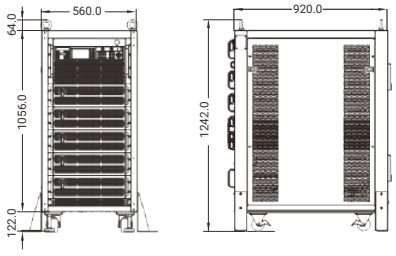
Dimension Drawing(18U Automatic Models) unit:mm



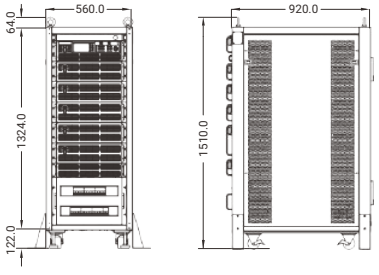
Dimension Drawing(24U Manual Models) unit:mm



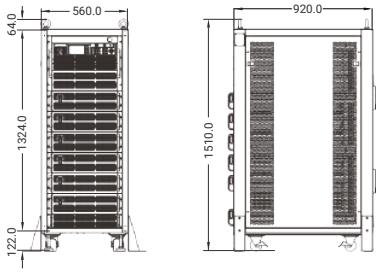
Dimension Drawing(24U Automatic Models) unit:mm



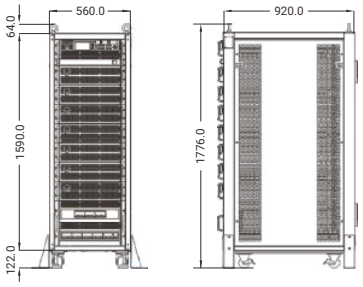
Dimension Drawing(30U Manual Models) unit:mm



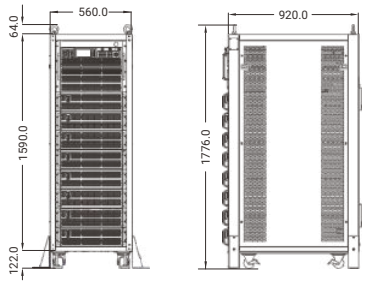
Dimension Drawing(30U Automatic Models) unit:mm



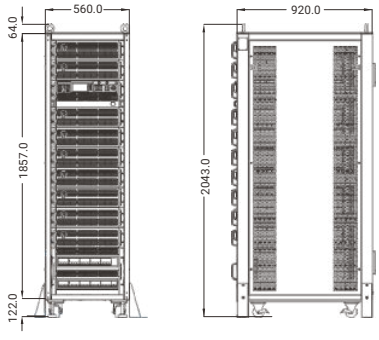
Dimension Drawing(36U Manual Models) unit:mm



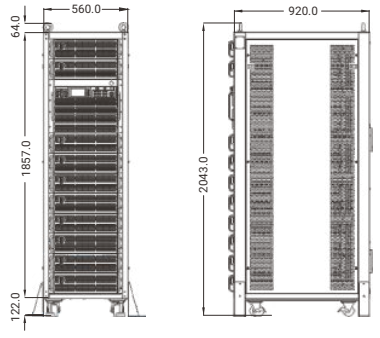
Dimension Drawing(36U Automatic Models) unit:mm



Dimension Drawing(42U Manual Models) unit:mm



Dimension Drawing(42U Automatic Models) unit:mm



Model		CSP8		CSP5	
Control Unit		1~10 (3U Height Unit)	1~5 (6U Height Unit)	1~5 (3U Height Unit)	1~2 (6U Height Unit)
Input					
Input Voltage Range (L-L) [1]		187···253VAC			
Rated Voltage (L-L) [1]		340···460VAC			
Input Frequency Range		45~65Hz			
Wires		3ph, PE			
Max Current [1]		800A@208V Input	800A@208V Input	400A@208V Input	400A@208V Input
		400A@400V Input	400A@400V Input	200A@400V Input	200A@400V Input
Max Power		230kVA	230kVA	120kVA	120kVA
Timer Setting					
Power OFF Timer		DDD/HH/MM			
Sequential Control Settings					
Power ON Sequence		From the first Slave unit to the last Slave unit			
Power OFF Sequence		All slave units Power Off at the same time			
ON/OFF Control		Manual/Timer/Remote			
Power Meter					
Voltage(L1/L2/L3)	Range	180~460VAC			
	Resolution	0.01V			
	Accuracy	± 0.2%			
Frequency	Resolution	0.01Hz			
	Accuracy	± 0.2%			
Current(L1/L2/L3)	Range	0~800A		0~400A	
	Resolution	0.01A			
	Accuracy	± 0.8%			
Power	Resolution	0.001kW			
	Accuracy	± 1.5%			
Power Factor	Resolution	0.01			
	Accuracy	± 1%			
Protection					
OVP		+10% of Nominal Input			
UVP		-10% of Nominal Input			
OCP		+10% of Max. Input Current			
OFP/UFP		50Hz±5Hz/60Hz±5Hz			
Phase Loss		Alarm and stop operation when lose any phase			
Safety					
Emergency Stop		Multiple rack cabinet EMS can be connected in series			
		Extendable EMS switch			
General Specification					
Controller Power Supply	Input Voltage	187···253VAC			
		340···460VAC			
	Frequency	45~65Hz			
	Power Consumption	55W	60W	44W	50W
	Standby Power	28W	28W	28W	28W
Graphic Display		4.3" Color touch LCD			
Operation Key Feature		Soft keys, Numberic keys, Rotary knod, USB port for transfer and upgrading firmware			
Interface		RS232/RS485/USB(Standard), GPIB & LAN(Optional), CAN(Optional)			
Command Response Time		<3ms			
Environmental					
Operating Temperature		0~40°C			
Storage Temperature		-20~70°C			
Temperature Coefficient		<95%RH(non-condensing)@35°C, <80%RH(non-condensing)@40°C			
Relative Humidity		<2000m			
Cooling Method		Forced air cooling			
Mechanical					
Dimensions(WxHxD)		423.0 x 353.0 x 578.0 mm		423.0 x 220.0 x 578.0 mm	
Unit Weight		28kg		20kg	
Withstanding Voltage					
Primary - Chassis		DC 2121V			
Primary - Secondary		DC 4242V			
Secondary - Chassis		DC 2121V			

[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.

SP-300 Series
Single-phase Programmable AC Power Supply

It is a switching mode single-channel output high-precision programmable AC power source, which adopts high speed DSP+CPLD control, high frequency PWM power technology and active PFC design to realize AC/DC stable output. It is featured with high power density, high reliability and high precision, meanwhile it possesses operation interface of touch screen and keys manually. It is able to analog output normal or abnormal input for electrical device to meet test requirements. Meet the verification of power electronics, motors, lighting, automotive electronics research and development quality assurance laboratory, as well as the production test verification of factory production line.

(2U)600W~1500W
Optional Information: (1) (2) (3)

(3U)2000W
Optional Information: (4) (5)

(4U)3000W~5000W
Optional Information: (4) (5)

Features

- Large color touch screen with intuitive interface, easy to operate.
- Features AC, DC, AC+DC output modes, AC+DC output mode for voltage DC offset simulation.
- Turn on, turn off phase angle control, 0-359.9°.
- Output frequency: 15-1200Hz, programmable slew rate setting for changing voltage and frequency.
- High output current crest factor which is ideal for inrush current testing.
- Built-in power meter function, can real-time measure 15 electrical parameters such as RMS voltage, current, power, apparent power and etc. This series AC source can measure up to 40 orders of the voltage or current harmonics. Support LIST/PULSE/STEP modes to simulate all kinds of power line disturbance conditions.
- Triac Dimmer function for dimming/governor simulation function.
- Sweep function for efficiency testing and shows voltage and frequency value at max power.
- Multiple current range to make current measurement more accurate.
- Front panel USB interface supports CSV format to import waveform.
- OCP/OVP/OPP/OTP/reverse current protection/short circuit protection.
- Programmable voltage and current limit, support CC mode.
- Support up to 2 units in series, 4 units in parallel.
- Support three phase power output, can simulate three phase unbalanced output.
- Support external analog input control and TTL electrical level output.
- Two versions to meet the cost performance and different applications.

Quick Selection:

Output Voltage	2U			3U	4U		
	600W	1000W	1500W	2000W	3000W	4000W	5000W
150VAC/300VAC	5.6A/2.8A	9.2A/4.6A	13.8A/6.9A	16A/8A	27.6A/13.8A	32A/16A	46A/23A

Difference Between Advanced Version and Professional Version

Function description	Advanced Version	Professional Version
Output frequency range	15~1000Hz	15~1200Hz
Built-in IEC standards	IEC 61000-4-11	IEC 61000-4-11; IEC 61000-4-13; IEC 61000-4-14; IEC 61000-4-28
Programmable output impedance	Not supported	Support, meet IEC 61000-3-2/ IEC 61000-3-3 output impedance test requirements
Harmonic/inter-harmonic generation simulation and measurement function	Not supported	Support, the harmonic components can be up to 40 orders

Optional Information

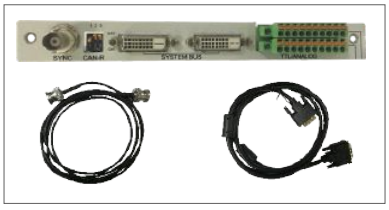
(1) LAN & GPIB interface card & cables

(2) Analog I/O interface card & cable

(3) Multiphase link card & cable

(4) GPIB interface card & cable

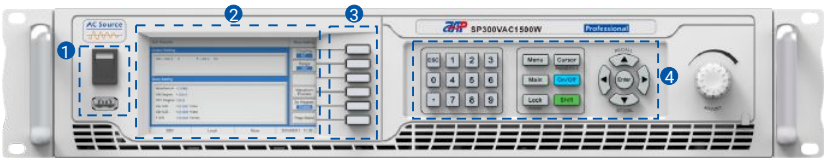
(5) Analog I/O & multiphase link card & cables



Panel Introduction

0.6 - 1.5kVA

■ Front Panel Introduction



■ Rear Panel Introduction

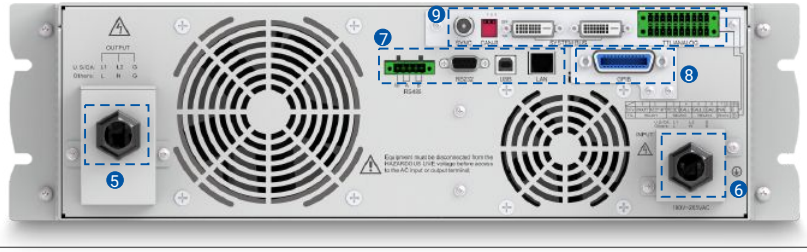
1. Power Switch (Up), USB Interface (Down)
2. Color Touch Screen
3. Multifunctional Keys
4. Numeric and Functional Keys
5. Output Terminal
6. AC Input Terminal
7. RS485/RS232/USB Communication Interface (LAN & GPIB Interface Card is Optional)
8. Analog I/O Interface Card (Optional)

Note: If the LAN&GPIB communication card is selected, it will replace RS485/RS232/USB to be installed in the same position;
If parallel/multiphase interface card is selected, it will replace remote I/O interface card to be installed in the same position.

2 - 5kVA

■ Front Panel Introduction

■ Rear Panel Introduction

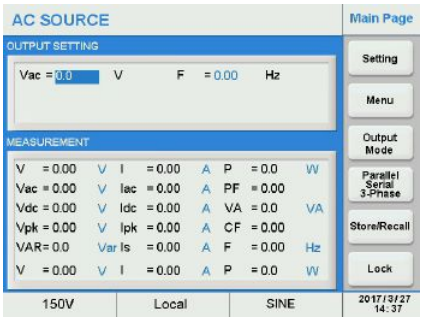


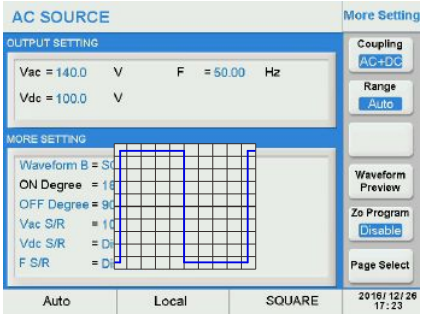
1. Power Switch (Up), USB Interface (Down)
2. Color Touch Screen
3. Multifunctional Keys
4. Numeric and Functional Keys
5. Output Terminal
6. AC Input Terminal
7. RS485/RS232/USB/LAN Communication Interface
8. GPIB Communication Interface (optional)
9. Analog I/O & multiphase link card (optional)

Function Introduction

Graphical User Interface

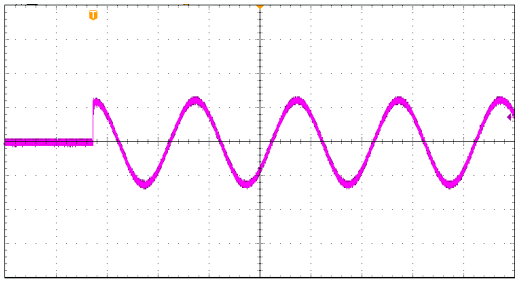
The large color touch screen provides simple and fast operation for customers, real-time update of display output data and power status, and graphical display makes it more intuitive.





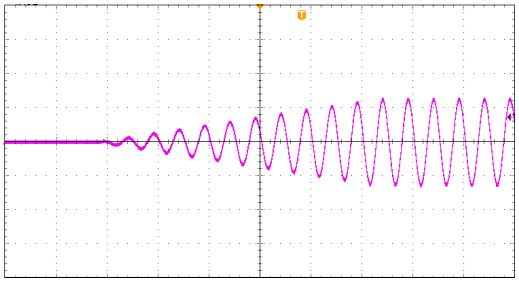
Settable ON/OFF Phase Angle of Output Waveform

This series of AC power supply can set the ON phase and OFF phase of sinusoidal output waveform, suitable for the output test of switching power supply. Set the ON angle to 90 degrees for surge current testing, the power supply will show the measured value of surge current. Users can set when start to measure the surge current and the duration of the measurement.



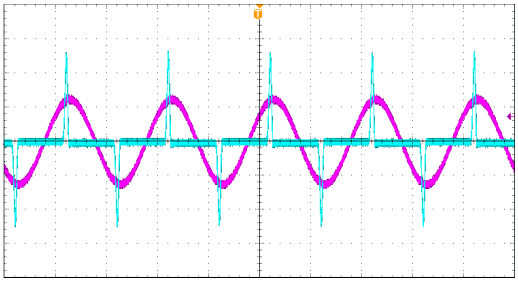
Slew Rate Setting For Voltage and Frequency

This series AC power supply let users set the slew rate of voltage and frequency, in such application in order to reduce the inrush current during motor or compressor startup.



High Output Crest Factor

This series AC power supply deliver up to 5~6 times of peak current from its RMS current, so it is suitable for testing switching power supplies and motor with high inrush current issue.

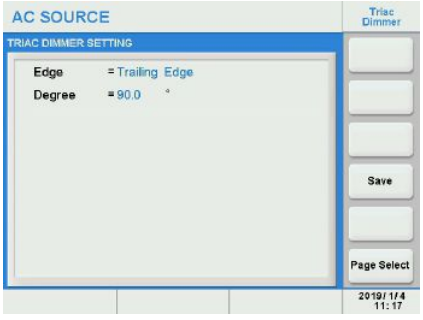


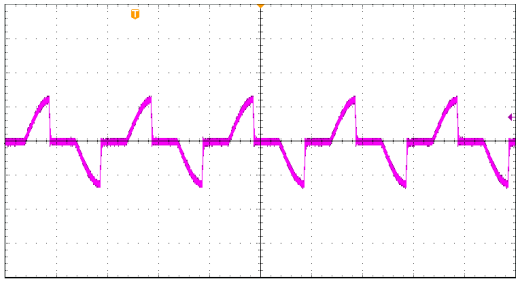
Power Sweep Function

This series AC power supply can test the efficiency of switching power supply and capturing the voltage, current, power and frequency at the maximum power operating point, the measurements will be displayed at the end of the sweep.

Triac Dimmer Function

This series AC power supply built-in triac dimmer function, which is used to do dimming and speed regulating test for lamp or electric motor to ensure the products work well both in R&D and production testing.

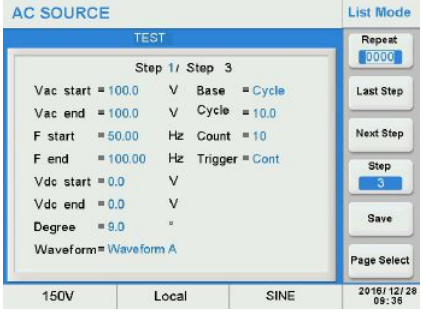


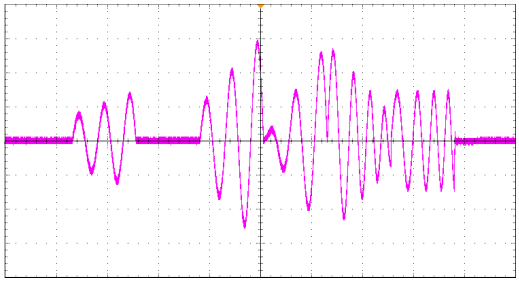


Power Line Disturbance Simulation

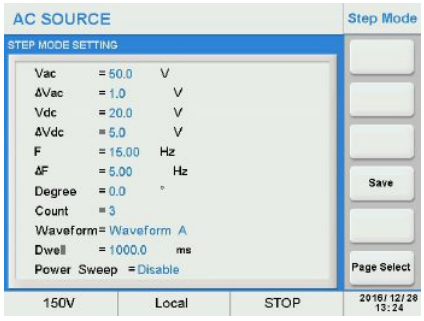
This series AC power supply provides powerful function to simulate all kinds of power line disturbance conditions such as cycle dropout, transient spike, brown out and etc. This feature make this series AC power supply ideal for R&D labs, universities and certification labs.

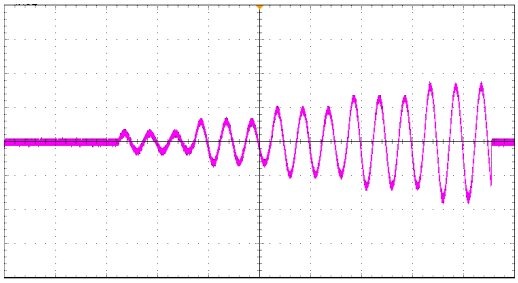
LIST Mode



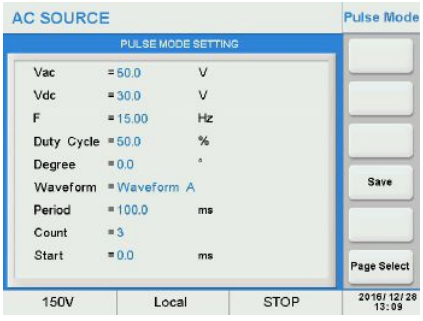


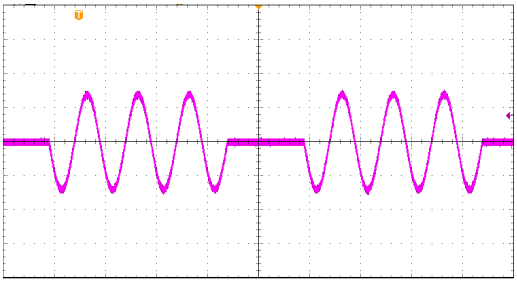
STEP Mode



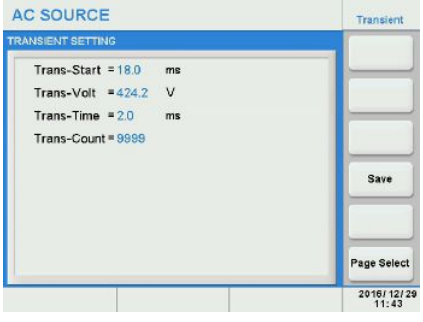


PULSE Mode

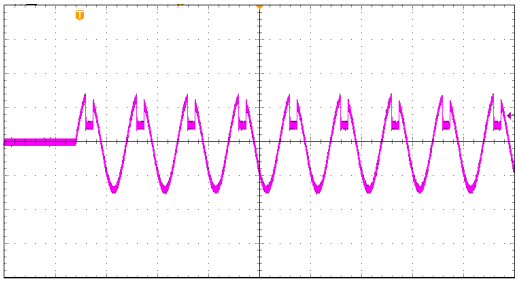




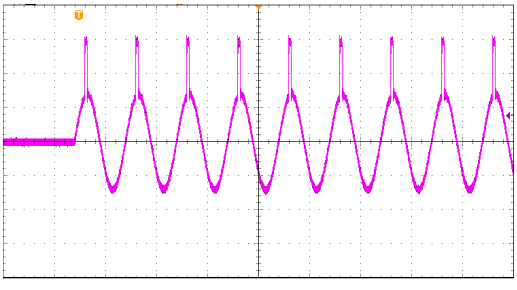
Voltage Sags/Voltage Spikes



Voltage Sags

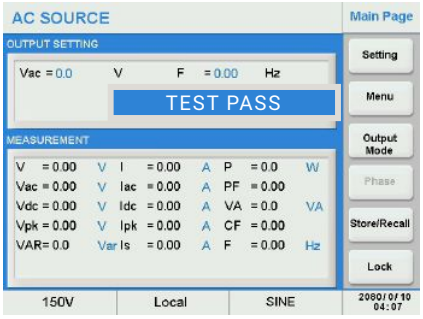


Voltage Spikes



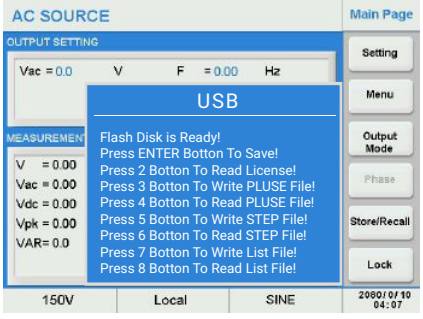
Test Mode

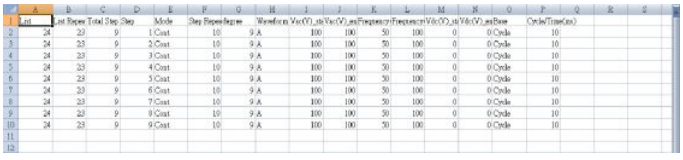
The test mode compares measurement values against a user defined set of measurement limits and shows a PASS or FAIL result in one or more measurement are out of range. The user can set when start of the measurement and duration of the test.



File Save and Recall Via The USB Interface

The user can save the screenshot via the USB interface in the front panel. The user can import a CSV file via the USB interface to generate waveform output.

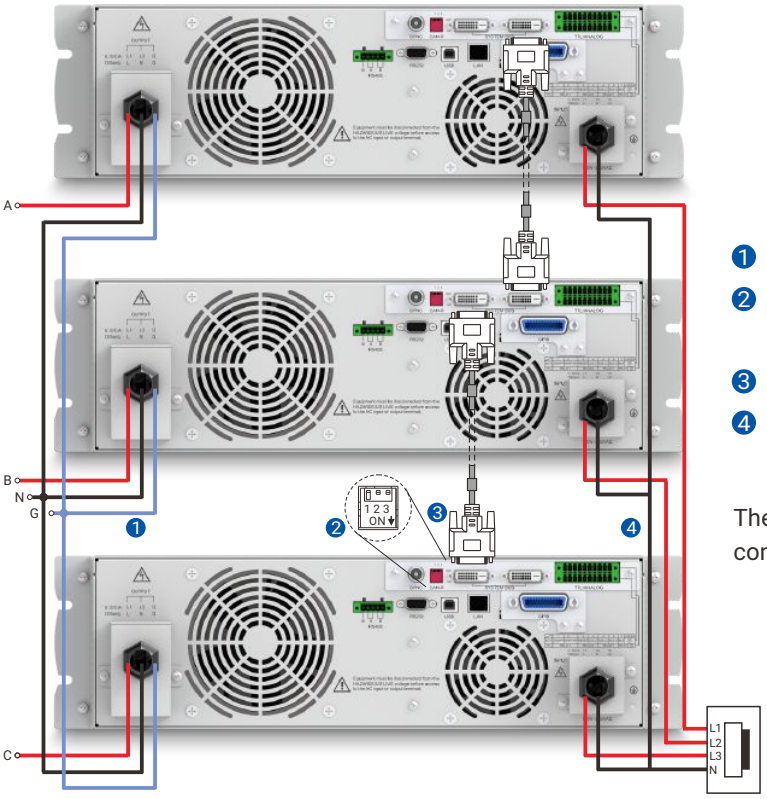




Parallel/Series/3-Phase Mode

This series AC power source can be used in parallel or series to provide more power, the maximum current up to 184A and the voltage up to 600V. In 3-phase mode, the Master unit is always phase A, Slave 1 is always phase B and Slave 2 is always phase C. The phase difference between phase A and B is always 120° and between phase A and C is always 240°. The output voltage of phase B and C will be set to the same setting as that for phase A (Master) if the Voltage Mode is set to COM. Or if the Voltage Mode is set to Multi, phase B and C output voltage can be set individually to simulate 3-phase unbalance system. The output of 3-Phase system can be connected for three-phase, four wire (Delta configuration) loads or for three-phase, five wire (Wye configuration) according to the application requirement.

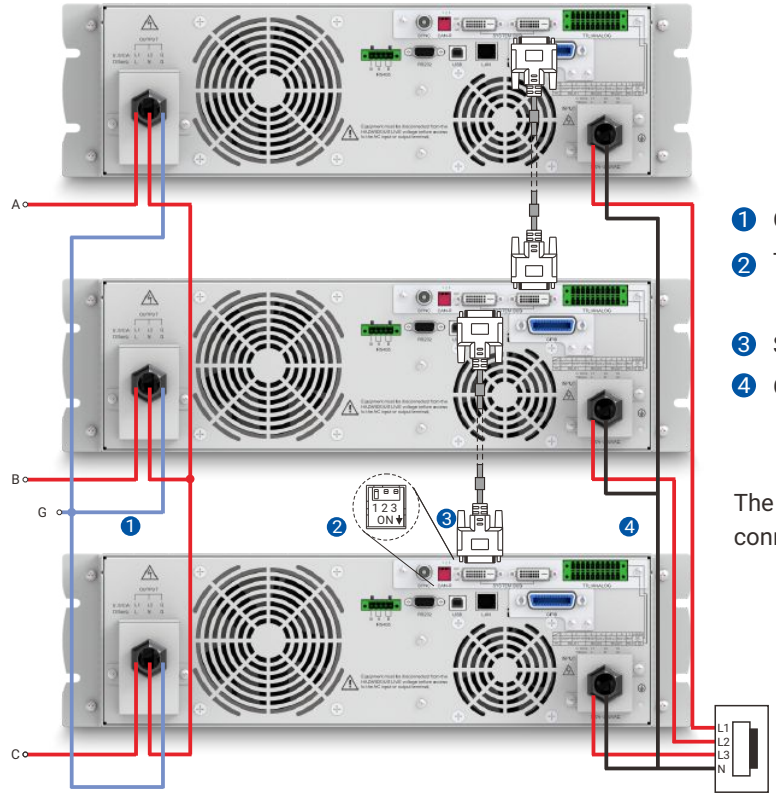
Three-phase five-wire connection (Wye type)



1. Output connections
2. Terminal resistance CAN-R, flip Dip switch 1 to ON position (Down)
3. System bus communication cable
4. Only support three-phase five-wire connection

The output voltage range of three-phase five-wire (Wye type) connection is 0 ~ 300V.

Three-phase four-wire connection (Delta type)



1. Output connections
2. Terminal resistance CAN-R, flip Dip switch 1 to ON position (Down)
3. System bus communication cable
4. Only support three-phase five-wire connection

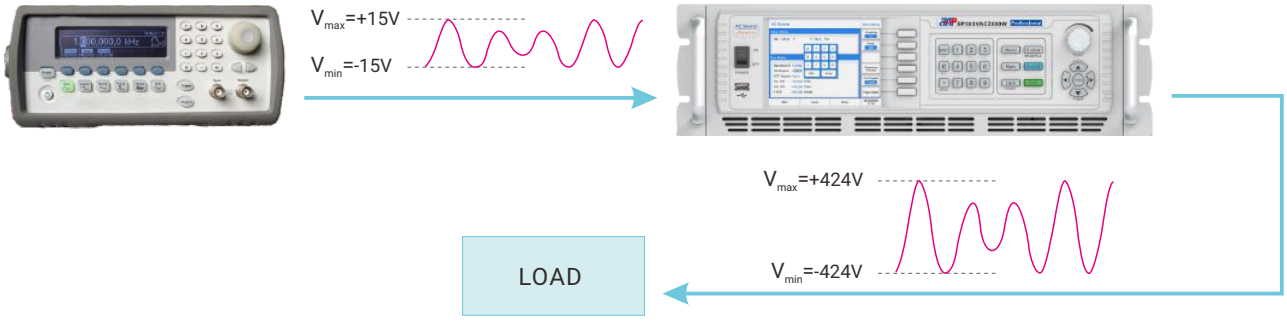
The output voltage range of three-phase four-wire (Delta type) connection is 0 ~ 519V.

External Control Function

By selecting Analog I/O card to achieve below function:

1) Amplifier Mode

In Amplifier mode, the power source acts as a power amplifier, taking a low-level analog signal and amplifying it by a fixed amount of gain.



2) External Control Instruction

Pin No.	Reference	Type	Description	Maximum
Pin1	ON/OFF	EXT.V	Control input for output on/off, low level (0~0.5V) disables the output, high level (4.5~5.5V) enables the output	6Vdc
Pin2	KEEP OFF[1]	EXT.V	Keep OFF function, low level (0-0.5V) disables the function, high level (4.5-5.5V) enables the function	
Pin3	RESET	EXT.V	High level (4.5 ~ 5.5V) will enable alarm clear function	
Pin4	CALL 1	EXT.V	0=low electrical level (0-0.5V), 1= high electrical level (4.5 ~ 5.5V)	
Pin5	CALL 2	EXT.V	0=low electrical level (0-0.5V), 1= high electrical level (4.5 ~ 5.5V)	
Pin6	CALL 3	EXT.V	0=low electrical level (0-0.5V), 1= high electrical level (4.5 ~ 5.5V)	
Pin7	N/A	EXT.V	Not Used	–
Pin8-10	⏚	EXT.V	GND	–

[1] If the KEEP OFF signal keeps high (enable) there will be always no output.

3) TLL Signal Instruction

Pin No.	Reference	Type	Description	Maximum	Electrical Parameters
Pin1-2	RELAY1-PASS	TTL	These two pins will connected internally when the unit passed the test mode	250VAC 3Amp/ 30VDC 3Amp	These pins without positive andnegative polarity, do not share the ground netither.
Pin3-4	RELAY2-FAIL	TTL	These two pins will connected internally when the unit failed the test mode		
Pin5-6	RELAY3-RUN	TTL	These two pins will connected internally when the unit is running		
Pin7-8	RELAY4	TTL	Not Used	–	–
Pin9-10	⏚	TTL	GND	–	–

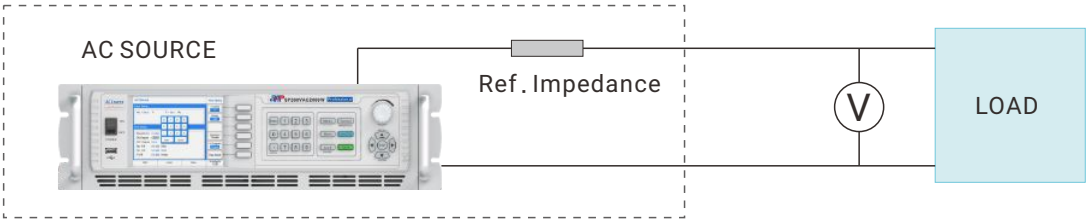
Firmware Upgrade

This series AC power source supports firmware upgrade. The DSP firmware can be upgraded via RS232 communication, the display and remote firmware can be upgraded via the USB interface in the front panel. The upgrade process is very easy to operate. The upgrade feature keeps the latest software function supported by the power supply.

Professional Version Power Supply Function

Programmable Output Impedance Function

The low output impedance and low voltage harmonics of this series power supply make it ideal for IEC61000-3-2 standard testing. A current feedback control circuit makes the output voltage changed with load. This feature is suitable for IEC61000-3-3 Flicker tests. The user can set the resistance and inductance value according to the test requirement.



More Built-in IEC Standard Test Waveforms

Professional version supports more built-in IEC standard test waveforms

IEC 61000-4-11，Testing and measurement techniques-Voltage dips, short interruptions and voltage variations immunity tests (AC,<16A)

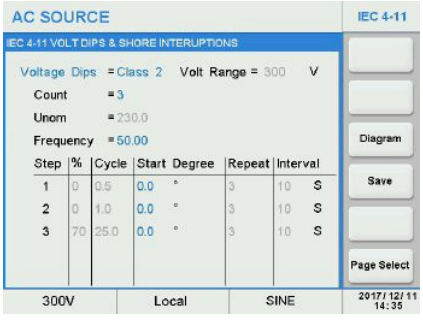
IEC 61000-4-13，Testing and measurement techniques-Harmonics and inter-harmonics including mains signaling at AC power port, low frequency immunity tests

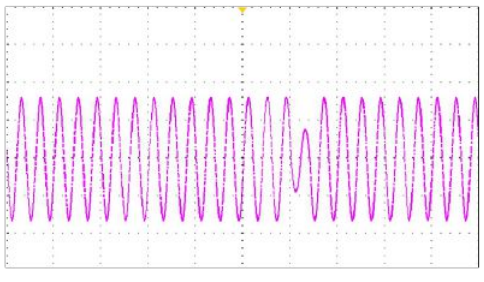
IEC 61000-4-14，Testing and measurement techniques-Voltage fluctuation immunity test

IEC 61000-4-28，Testing and measurement techniques-Variation of power frequency, immunity test for equipment with input current not exceeding 16 A per phase

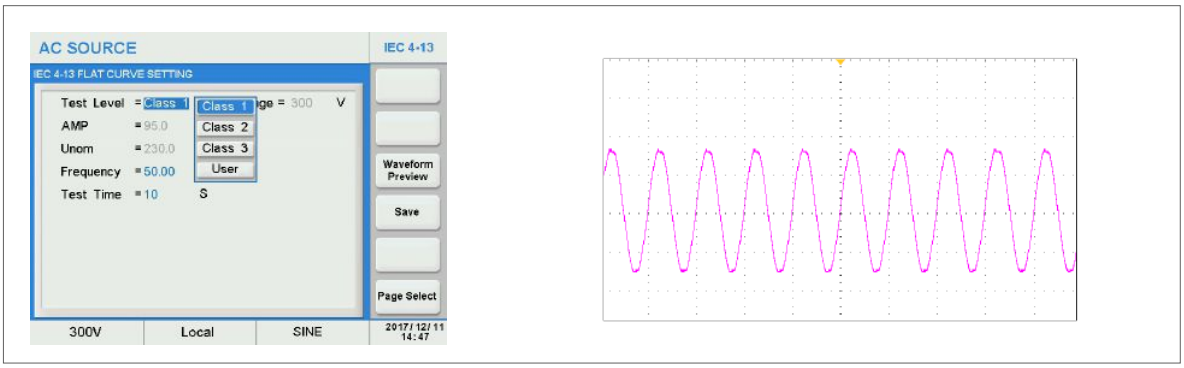
The above standards can meet the power immunity test for products exported to Europe.

IEC 61000-4-11

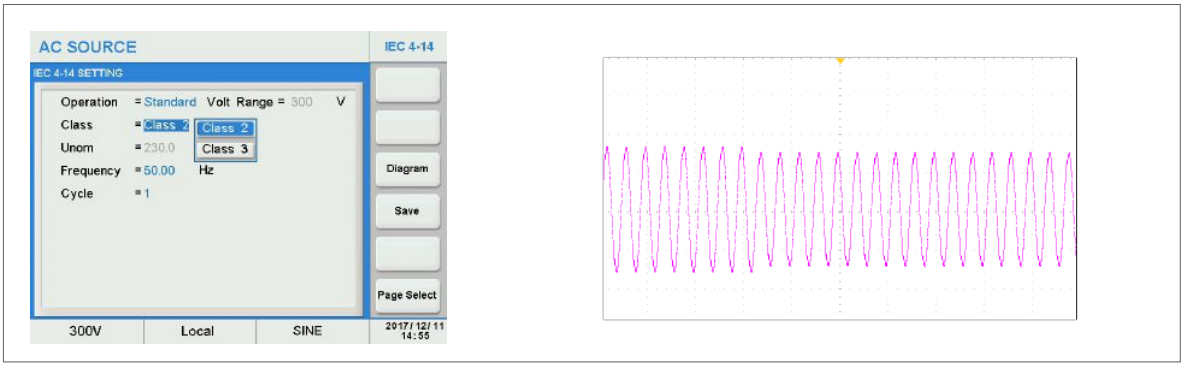




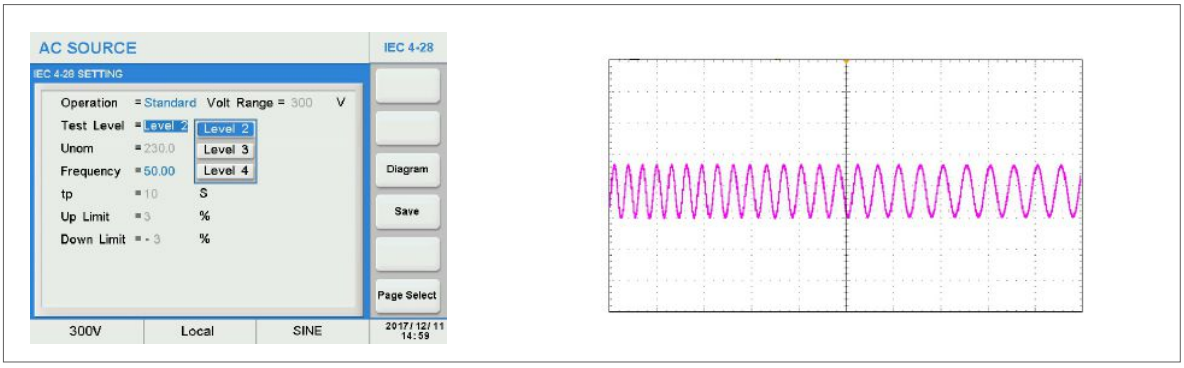
IEC 61000-4-13



IEC 61000-4-14

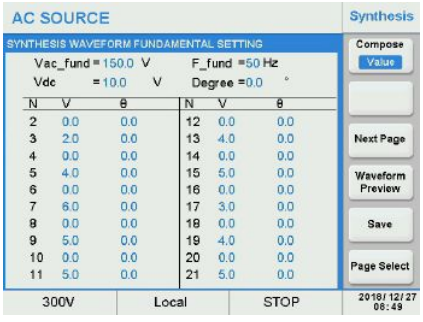


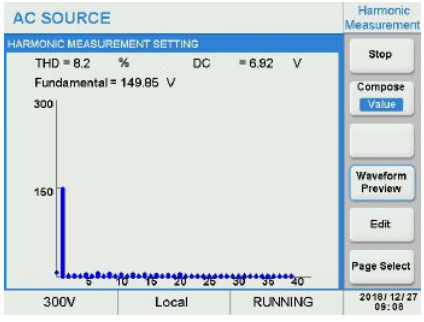
IEC 61000-4-28

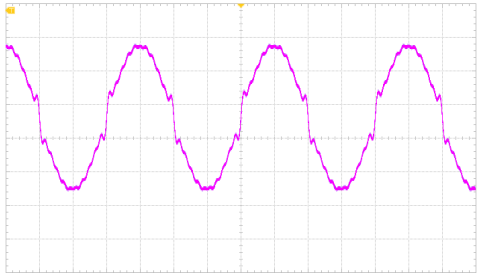


Harmonic/inter-harmonic Generation Simulation and Measurement Function

Support creating waveforms made up of a series of harmonics frequencies, amplitudes and phase shifts, up to 40 orders harmonics of 50Hz or 60Hz. The harmonics measurement function measures total harmonic distortion (THD), DC voltage and current and fundamental voltage and current for output settings of 50Hz or 60Hz. The measurement of 2~40 orders can be displayed in absolute values or in percent of the fundamental, the harmonics measurement will be displayed with a graphical representation.





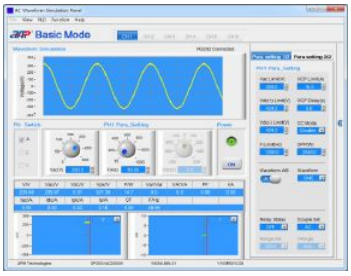


Monitoring Software

AC Waveform Simulation Panel is a graphical user interface that provides extraordinary capabilities and convenience by delivering control of the unit remotely, which covers all functions of panel operation.

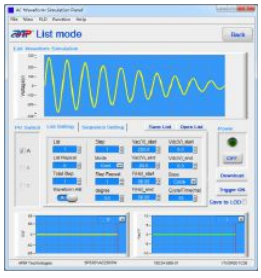
Login Interface

Basic mode(Main interface)

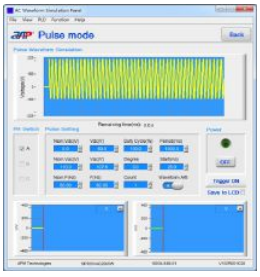


IEC61000 4-11 interface

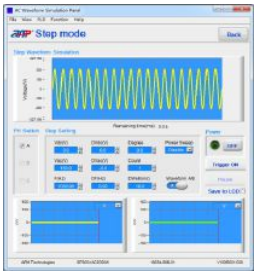
List mode interface



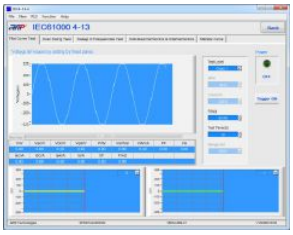
Pulse mode interface



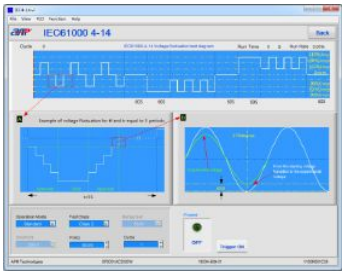
Step mode interface



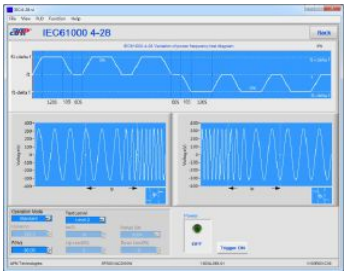
IEC61000 4-13 interface



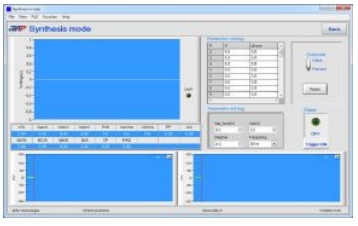
IEC61000 4-14 interface



IEC61000 4-28 interface

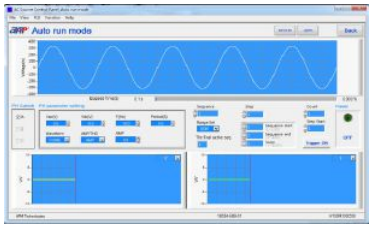


Synthesis mode interface

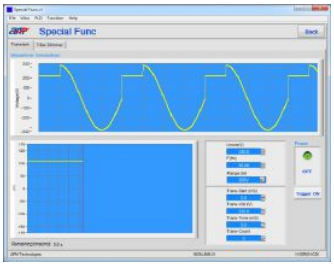


Harmonics Measure mode interface

Auto run mode interface

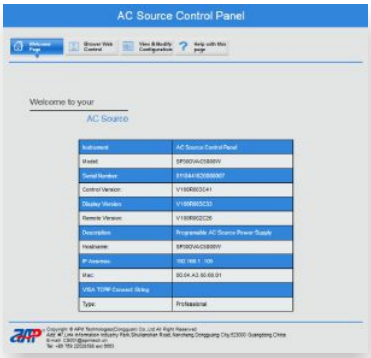


Special Func interface



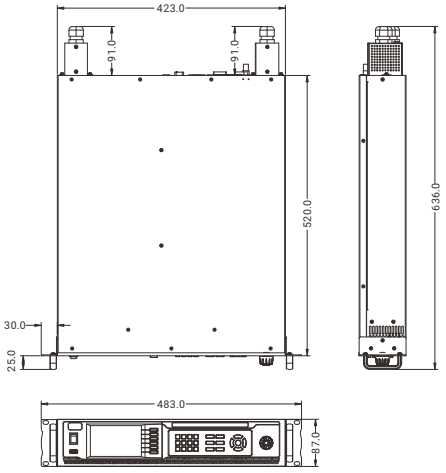
Web Server Function

This series AC power supply provides a built-in web server interface, then the user can configure and monitor the settings from the PC's Web browser.

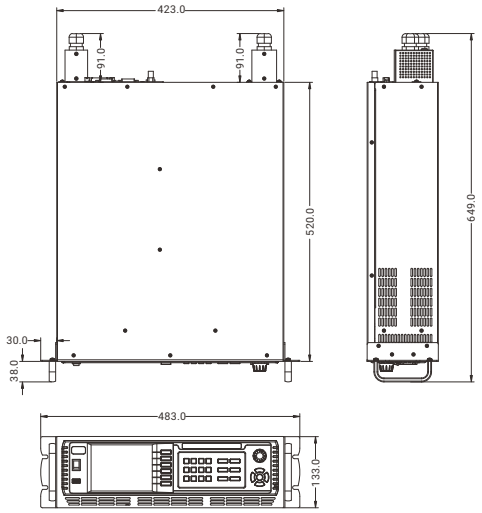


Dimension Drawing

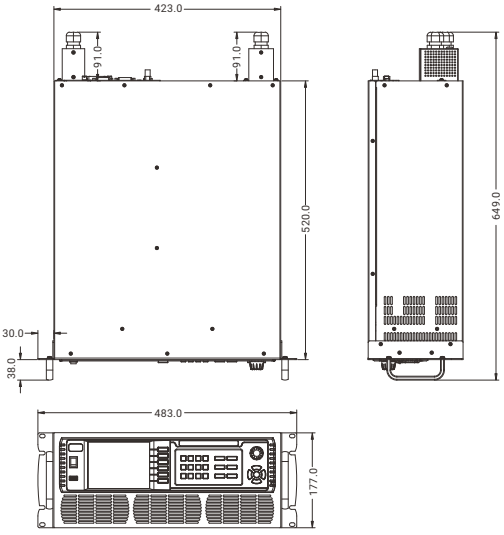
Dimension Drawing(2U) unit:mm



Dimension Drawing(3U) unit:mm



Dimension Drawing(4U) unit:mm



SP-300 Series Programmable AC Power Supply

Model		SP300VAC600W	SP300VAC1000W	SP300VAC1500W
Input				
Voltage		90~265VAC	90~265VAC	100~265VAC
Frequency		47~63Hz		
Phase		1 Phase, 2Wire+Groud		
Max. Current		10A	15A	19A
Power Factor at 220VAC Input, Full Load		≥ 0.91 Active PFC	≥ 0.95 Active PFC	≥ 0.97 Active PFC
Efficiency		> 82%(Peak) > 80% at 220VAC, 50Hz input/230VAC, 50Hz output, Full Load	> 86%(Peak) > 84% at 220VAC, 50Hz input/230VAC, 50Hz output, Full Load	> 87%(Peak) > 86% at 220VAC, 50Hz input/230VAC, 50Hz output, Full Load
Output				
AC Power		600VA	1000VA	1500VA
Max. Current (r.m.s)	0~150V(L)	5.6A	9.2A	13.8A
	0~300V(H)	2.8A	4.6A	6.9A
Max. Current (Peak)	0~150V(L)	32.4A	55.2A	82.8A
	0~300V(H)	16.2A	27.6A	41.4A
Phase		1 Phase		
Total Harmonic Distortion (THD)		<0.5% (Resistive Load) at 15.0~70.0Hz and output voltage within 80~140VAC at Low Range or 160~280VAC at High Range. <1% (Resistive Load) at 70.1~500Hz and output voltage within 80~140VAC at Low Range or 160~280VAC at High Range. <1% (Resistive Load) at 501~1000Hz and output voltage within 100~140VAC at Low Range or 160~280VAC at High Range. <2% (Resistive Load) at 1001~1200Hz and output voltage within 100~140VAC at Low Range or 160~280VAC at High Range. Note: 1001~1200Hz only available to Professional Version Models.		
Crest Factor (CF)		< 6		
Load Regulation		± 0.1%F.S. @15~70Hz (Resistive Load) ± 0.5%F.S. @Others Freq. (Resistive Load)		
Line Regulation		± 0.1V		
Rise/Fall Time (DC)		< 250us		
Voltage (AC)	Range	0~300VAC , 150V/300V/Auto		
	Resolution	0.1V		
	Accuracy	0.2% of setting + 0.2%F.S.		
Phase Angle (Starting / Ending)	Range	0~359.9°		
	Resolution	0.1°		
	Accuracy	± 1°@45~65Hz		
Voltage (DC)	Range	0~424VDC		
	Resolution	0.1V		
	Accuracy	0.2% of setting + 0.2%F.S.		
	Max. Power	600W	1000W	1500W
	Max. Current (L/H Range)	L 3.96A	L 6.5A	L 9.76A
		H 1.89A	H 3.3A	H 4.88A
	Ripple & Noise (r.m.s)	L <700mVrms @Bandwidth 20Hz to 1MHz		
		H <1100mVrms @Bandwidth 20Hz to 1MHz		
	Ripple & Noise (Peak)	<4000mVp-p @Bandwidth 20Hz to 1MHz		
Current CC Fold Mode	Resolution	0.01A		
	Accuracy	0.5% of setting + 1.0%F.S.		
	Response Time	<1400ms		
Frequency	Range[1]	15~1200Hz Full Range ADJ		
	Resolution	0.1Hz (15.0~99.9Hz), 1Hz (100~1000Hz), 5Hz (1001~1200Hz)		
	Accuracy	0.03% of setting		
Programmable Output Impedance[2]		0Ω+0mH~1Ω+1mH		
Harmonics & Inter-harmonics Simulation[3]		2400Hz		
Measurement				
Voltage	Range	AC 0~300VAC		
		DC 0~424VDC		
	Resolution	0.1V		
	Accuracy	0.2% of setting + 0.2%F.S.		
Frequency	Range[1]	15~1200Hz		
	Resolution	0.1Hz(15.0~99.9Hz),1Hz(100~1000Hz), 5Hz(1001~1200Hz)		
	Accuracy	0.1% of setting		
Current (r.m.s)	Range	H 0.15A~5.6A	H 0.15A~9.2A	H 0.15A~13.8A
		M –	M –	M –
		L 0.1A~3A	L 0.1A~3A	L 0.1A~3A
		mA –	mA –	mA –
	Resolution	0.01A		
	Accuracy	0.4%+1.0%F.S.		H 0.4%+1.0%F.S. L 0.4%+1.5%F.S.
Current (Peak)	Range	0~32.4A	0~55.2A	0~82.8A
	Resolution	0.01A		
	Accuracy	H 0.4%+1.0%F.S.		
		L 0.4%+1.5%F.S.		

Model		SP300VAC600W	SP300VAC1000W	SP300VAC1500W
Power	Range	0~600W	0~1000W	0~1500W
	Resolution	0.1W		
	Accuracy	0.4% of setting + 1.0% F.S. at PF>0.2, Voltage>5V		
Power Apparent (VA)	Range	0~612VA	0~1020VA	0~1530VA
	Resolution	0.1VA		
	Accuracy	Voltage*Irms, Calculated value		
Power Resistive (VAR)	Range	0~612VAR	0~1020VAR	0~1530VAR
	Resolution	0.1VAR		
	Accuracy	$\sqrt{(VA)^2-(W)^2}$, Calculated value		
Power Factor (PF)	Range	0.00~1.00		
	Resolution	0.01		
	Accuracy	W/VA, Calculated value		
Harmonic	Range[4]	2~40 orders		
Extra Function				
Remote Sense	Range	5V(rms), Max. Total power less than rated power.		
Slew Rate	Range	AC Voltage 0.001~1200.000V/ms and Disable		
		DC Voltage 0.001~1000.000V/ms and Disable		
		Frequency 0.001~1600.000Hz/ms and Disable		
Transient Generator (only for 15~70Hz)	Range	Trans-Start: 0.0~66.5ms @ 15Hz, Resolution: 0.1ms		
		Trans-Volt: -212V~+212V(L), -424V~+424V(H), Resolution: 0.1V		
		Trans-Time: 0.0~66.5ms @ 15Hz, Resolution: 0.1ms		
		Trans-Count: 0~9999, Constant		
Calibration		Firmware-based calibration through the digital interface or front panel		
Test Function		Yes		
Parallel Output for 1 Phase		Yes, 4 Units Max. (Option: Multiphase Link Card)		
Series Output for 1 Phase		Yes, 2 Units Max. (Option: Multiphase Link Card)		
Link Output for 3 Phase		Yes, (Option: Multiphase Link Card)		
General				
Graphic Display		4.3" Color touch LCD		
Operation Key Feature		Soft key, Numeric key, Rotary Knob, USB port for transfer and upgrading firmware		
Rack mount Handles		Yes		
FAN		Temperature Control		
Protection Circuits		OCP,OVP,OPP,OTP,RCP, PRI_UVP,PRI_OVP, PRI_OTP, PRI_OCP, USB_OCP		
Interface		Standard USB, RS-485, RS-232; GPIB & LAN is Optional		
Remote Control Input/Output Signal Characteristics (Option)				
Remote Input Signal		Signal input for external trigger for execution of programmed value Signal: ON/OFF, RESET, KEEP OFF, Recall program memory 1 through 7		
Remote Output Signal		Signal output indicating that a test mode is present Signal: PASS, FAIL, TEST-IN-PROCESS		
External Signal Waveform Input		Signal input for output voltage waveform programming by external analog reference via BNC type. Between the sync signal and the output wave will be 0.5ms time difference		
Environment				
Operating Temperature		0°C ~ 40°C		
Storage Temperature		-40°C ~ 85°C		
Fan Noise		73dBA Max.		
Altitude		2000m		
Relative Humidity		5%~95%, non-condensing		
Temperature Coefficient		100ppm/°C at Voltage, 300ppm/°C at Current, 100ppm/°C at Frequency		
Mechanical				
Dimensions (W*H*D)		423.0x87.0x520.0 mm		
Package Dimensions (W*H*D)		594.0x241.0x 744.0 mm		
Unit Weight		15.9kg		
Shipping Weight		19kg		
Regulatory Compliance				
EMC		CE marked for EMC Directive 2014/30/EU/EN61326-1: 2013 Class A for emissions and immunity standard as required for EU CE Mark. FCC Verification of conformity for CFR 47 Part 15 of the FCC Rules.		
Safety		CE marked for LVD Directive 2014/35/EU/EN61010-1-third edition as required for EU CE Mark.		
CE Mark		Installation Overvoltage Category II; Pollution Degree 2; Class II equipment; indoor use only.		
Isolation Voltage		3000VAC,input to output; 1500VAC,input to chassis.		
RoHS		Meet to EU Directive 2011/65/EU for restriction of hazardous substances in Electrical and Electronic Equipment.		

[1] Only Professional Version units support 15.00~1200.00Hz.
[2] Only Professional Version units support Programmable Output Impedance function.
[3] Only Professional Version units support Harmonics & Inter-harmonics Simulation function.
[4] Only Professional Version units support Harmonics function.

All specifications are subject to change without notice.

SP-300 Series Programmable AC Power Supply

Model		SP300VAC2000W	SP300VAC3000W	SP300VAC4000W	SP300VAC5000W
Input					
Voltage		190~265VAC			
Frequency		47~63Hz			
Phase		1 Phase, 2Wire+Groud			
Max. Current		14A	20A	25A	30A
Power Factor at 220VAC Input, Full Load		≥ 0.99，ActivePFC	≥ 0.98，ActivePFC	≥ 0.99，ActivePFC	≥ 0.99，ActivePFC
Efficiency		> 87%(Peak) > 86% at 220VAC, 50Hz input 230VAC,50Hz output, Full Load	> 86%(Peak) > 85% at 220VAC, 50Hz input 230VAC,50Hz output, Full Load	> 87%(Peak) > 86% at 220VAC, 50Hz input 230VAC,50Hz output, Full Load	> 87%(Peak) > 86% at 220VAC, 50Hz input 230VAC,50Hz output, Full Load
Output					
AC Power		2000VA	3000VA	4000VA	5000VA
Max. Current (r.m.s)	0~150V(L)	16A	27.6A	32A	46A
	0~300V(H)	8A	13.8A	16A	23A
Max. Current (Peak)	0~150V(L)	80A	165.6A	160A	184A
	0~300V(H)	40A	82.8A	80A	92A
Phase		1 Phase			
Total Harmonic Distortion (THD)		<0.5% (Resistive Load) at 15.0~70.0Hz and output voltage within 80~140VAC at Low Range or 160~280VAC at High Range. <1% (Resistive Load) at 70.1~500Hz and output voltage within 80~140VAC at Low Range or 160~280VAC at High Range. <1% (Resistive Load) at 501~1000Hz and output voltage within 100~140VAC at Low Range or 160~280VAC at High Range. <2% (Resistive Load) at 1001~1200Hz and output voltage within 100~140VAC at Low Range or 160~280VAC at High Range. Note: 1001~1200Hz only available to Professional Version Models.			
Crest Factor (CF)		≤ 5	≤ 6	≤ 5	≤ 4
Load Regulation		± 0. 1%F.S. @15~70Hz (Resistive Load) ± 0. 5%F.S. @Others Freq. (Resistive Load)			
Line Regulation		± 0.1V			
Rise/Fall Time (DC)		<180us			
Voltage (AC)	Range	0~300VAC，150V/300V/Auto			
	Resolution	0.1V			
	Accuracy	0.2% of setting + 0.2%F.S.			
Phase Angle (Starting / Ending)	Range	0~359.9°			
	Resolution	0.1°			
	Accuracy	±1°@45~65Hz			
Voltage (DC)	Range	0~424VDC			
	Resolution	0.1V			
	Accuracy	0.2% of setting + 0.2%F.S.			
	Max. Power	2000W	3000W	4000W	5000W
	Max. Current (L/H Range)	L 11.3A	L 19.6A	L 22.6A	L 32.6A
		H 5.65A	H 9.8A	H 11.3A	H 16.3A
	Ripple & Noise (r.m.s)	L <700mVrms @Bandwidth 20Hz to 1MHz			
		H <1100mVrms @Bandwidth 20Hz to 1MHz			
	Ripple & Noise (Peak)	<4000mVp-p @Bandwidth 20Hz to 1MHz			
Current CC Fold Mode	Resolution	0.01A			
	Accuracy	0.5% of setting + 1.0%F.S.			
	Response Time	<1400ms			
Frequency	Range[1]	15~1200Hz Full Range ADJ			
	Resolution	0.1Hz (15.0~99.9Hz), 1Hz (100~1000Hz), 5Hz (1001~1200Hz)			
	Accuracy	0.03% of setting			
Programmable Output Impedance[2]		0Ω+0mH~1Ω+1mH			
Harmonics & Inter-harmonics Simulation[3]		2400Hz			
Measurement					
Voltage	Range	AC 0~300VAC			
		DC 0~424VDC			
	Resolution	0.1V			
	Accuracy	0.2% of setting + 0.2%F.S.			
Frequency	Range[1]	15~1200Hz			
	Resolution	0.1Hz(15.0~99.9Hz), 1Hz(100~1000Hz), 5Hz(1001~1200Hz)			
	Accuracy	0.1% of setting			
Current (r.m.s)	Range	H 0.15A~20A	H 0.3A~27.6A	H 0.3A~32A	H 0.3A~46A
		M –	M 0.2A~20A	M 0.2A~20A	M 0.2A~20A
		L 0.1A~5A	L 0.1A~5A	L 0.1A~5A	L 0.1A~5A
		mA 0.02A~1.5A	mA 0.02A~1.5A	mA 0.02A~1.5A	mA 0.02A~1.5A
	Resolution	0.01A			
	Accuracy	H/M 0.4%+1.0%F.S.	H/M 0.4%+0.6%F.S.		
		L/mA 0.4%+1.0%F.S.	L/mA 0.4%+1.0%F.S.		
Current(Peak)	Range	0~81.5A	0~168.6A	0.05~163A	0.05~188A
	Resolution	0.01A			
	Accuracy	H/M 0.4%+1.5%F.S. L/mA 0.4%+1.5%F.S.			

Model		SP300VAC2000W	SP300VAC3000W	SP300VAC4000W	SP300VAC5000W
Power	Range	0~2040W	0~3060W	0~4080W	0~5100W
	Resolution	0.1W			
	Accuracy	0.4% of setting + 1.0% F.S. at PF>0.2, Voltage>5V			
Power Apparent (VA)	Range	0~2040VA	0~3060VA	0~4080VA	0~5100VA
	Resolution	0.1VA			
	Accuracy	Voltage*Irms, Calculated value			
Power Resistive (VAR)	Range	0~2040VAR	0~3060VAR	0~4080VAR	0~5100VAR
	Resolution	0.1VAR			
	Accuracy	$\sqrt{(VA)^2-(W)^2}$, Calculated value			
Power Factor (PF)	Range	0.00~1.00			
	Resolution	0.01			
	Accuracy	W/VA, Calculated value			
Harmonic	Range[4]	2~40 orders			
Extra Function					
Remote Sense	Range	5V(rms), Max. Total power less than rated power.			
Slew Rate	Range	AC Voltage 0.001~1200.000V/ms and Disable			
		DC Voltage 0.001~1000.000V/ms and Disable			
		Frequency 0.001~1600.000Hz/ms and Disable			
Transient Generator (only for 15~70Hz)	Range	Trans-Start: 0.0~66.5ms @ 15Hz, Resolution: 0.1ms			
		Trans-Volt: -212V~+212V(L), -424V~+424V(H), Resolution: 0.1V			
		Trans-Time: 0.0~66.5ms @ 15Hz, Resolution: 0.1ms			
		Trans-Count: 0~9999, Constant			
Calibration		Firmware-based calibration through the digital interface or front panel			
Test Function		Yes			
Parallel Output for 1 Phase		Yes, 4 Units Max. (Option: Remote I/O & Parallel, Multiphase Link Card)			
Series Output for 1 Phase		Yes, 2 Units Max. (Option: Remote I/O & Parallel, Multiphase Link Card)			
Link Output for 3 Phase		Yes, (Option: Remote I/O & Parallel, Multiphase Link Card)			
General					
Graphic Display		5.6" Color touch LCD			
Operation Key Feature		Soft key, Numeric key, Rotary Knob, USB port for transfer and upgrading firmware			
Rack mount Handles		Yes			
FAN		Temperature Control			
Protection Circuits		OCP,OVP,OPP,OTP,RCP,PRI_UVP,PRI_OVP,PRI_OTP,PRI_OCP,USB_OCP			
Interface		Standard USB, RS-485, RS-232, LAN; GPIB is Optional			
Remote Control Input/Output Signal Characteristics (Option)					
Remote Input Signal		Signal input for external trigger for execution of programmed value Signal: ON/OFF, RESET, KEEP OFF, Recall program memory 1 through 7			
Remote Output Signal		Signal output indicating that a test mode is present Signal: PASS, FAIL, TEST-IN-PROCESS			
External Signal Waveform Input		Signal input for output voltage waveform programming by external analog reference via BNC type. Between the sync signal and the output wave will be 0.5ms time difference			
Environment					
Operating Temperature		0°C ~ 40°C			
Storage Temperature		-40°C ~ 85°C			
Fan Noise		73dBA Max.			
Altitude		2000m			
Relative Humidity		5%~95%, non-condensing			
Temperature Coefficient		100ppm/°C at Voltage, 300ppm/°C at Current, 100ppm/°C at Frequency			
Mechanical					
Dimensions (W*H*D)		423.0x133.0x520.0 mm	423.0x177.0x520.0 mm		
Package Dimensions (W*H*D)		643.0x278.5x802.0 mm	643.0x323.0x802.0 mm		
Unit Weight		21.4kg	29.0kg		
Shipping Weight		24.4kg	32.0kg		
Regulatory Compliance					
EMC		CE marked for EMC Directive 2014/30/EU/EN61326-1: 2013 Class A for emissions and immunity standard as required for EU CE Mark. FCC Verification of conformity for CFR 47 Part 15 of the FCC Rules.			
Safety		CE marked for LVD Directive 2014/35/EU/EN61010-1-third edition as required for EU CE Mark.			
CE Mark		Installation Overvoltage Category II; Pollution Degree 2; Class II equipment; indoor use only.			
Isolation Voltage		3000VAC,input to output; 1500VAC,input to chassis.			
RoHS		Meet to EU Directive 2011/65/EU for restriction of hazardous substances in Electrical and Electronic Equipment.			

[1] Only Professional Version units support 15.00~1200.00Hz.
[2] Only Professional Version units support Programmable Output Impedance function.
[3] Only Professional Version units support Harmonics & Inter-harmonics Simulation function.
[4] Only Professional Version units support Harmonics function.

All specifications are subject to change without notice.

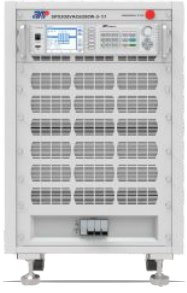
SPS-300 Series AC Power Supply System

This series AC Power Supply System adopts high speed DSP+CPLD control, high frequency PWM power technology and active PFC design to realize AC/DC stable output, high power up to 20kW.

The user friendly interface allows for quick access to AC source's function through a large graphic LCD display front panel with touch screen or keypad. Can simulate complex AC lines conditions and measure critical product characteristics during testing.

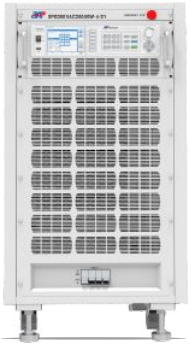
(9U)1200W~4500W

Optional Information: (1)



(17U)6000W~15000W

Optional Information: (2)



(21U)12000W~20000W

Optional Information: (2)

Features

- Large touch color screen, possess complete functions and easy to operate.
- AC+DC mixed or independent output mode for voltage DC offset simulation.
- Capable of setting output slope/phase angle, 0~359.9°.
- Output frequency 15~1000Hz, capable of setting output slope of voltage and frequency.
- High output crest factor could satisfy surge tests requirements.
- Multiple current measuring level selection. Increase measurement accuracy.
- Standard USB data interface, support CSV file waveform import.
- OCP/OVP/OPP/OTP/ Short circuit protection.
- Built-in power meter, which is capable of measuring 15 electrical parameters per phase, including voltage, current, power, etc.
- With reverse current protection to avoid current flowing backward.
- Capable of setting voltage and current output restriction, support for constant current output mode.

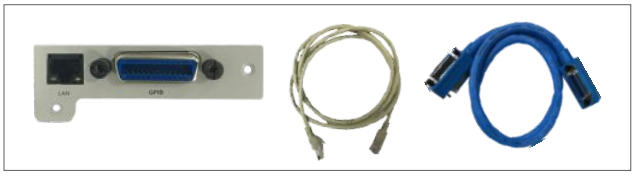
Quick Selection:

Output Voltage	Output Mode	2 Parallel						
		9U Cabinet			17U Cabinet			
		1200W	2000W	3000W	4000W	6000W	8000W	10000W
150VAC/300VAC	1 Phase	10.08A/5.04A	15.56A/8.28A	24.84A/12.42A	28.8A/14.4A	49.68A/24.84A	57.6A/28.8A	82.8A/41.4A
Output Voltage	Output Mode	3 Parallel						
		9U Cabinet			17U Cabinet			
		1800W	3000W	4500W	6000W	9000W	12000W	15000W
150VAC/300VAC	1 Phase	15.12A/7.56A	24.84A/12.42A	37.26A/18.63A	43.2A/21.6A	74.52A/37.26A	86.4A/43.2A	124.2A/62.1A
Output Voltage	Output Mode	4 Parallel						
		17U Cabinet				21U Cabinet		
		2400W	4000W	6000W	8000W	12000W	16000W	20000W
150VAC/300VAC	1 Phase	20.16A/10.08A	33.12A/15.56A	49.68A/24.84A	57.6A/28.8A	99.36A/49.68A	115.2A/57.6A	165.6A/82.8A
Output Voltage	Output Mode	2 Series						
		9U Cabinet			17U Cabinet			
		1200W	2000W	3000W	4000W	6000W	8000W	10000W
300VAC/600VAC	1 Phase	5.04A/2.52A	8.28A/4.14A	12.42A/6.21A	14.4A/7.2A	24.84A/12.42A	28.8A/14.4A	41.4A/20.7A

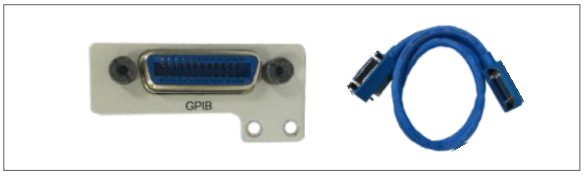
* This formula is the standard cabinet for SP-300 series 2U/3U/4U model. It is available to select cabinet with different specification according to exact situation. Detail please consults our area manager.

Optional Information

(1) LAN & GPIB interface card & cables

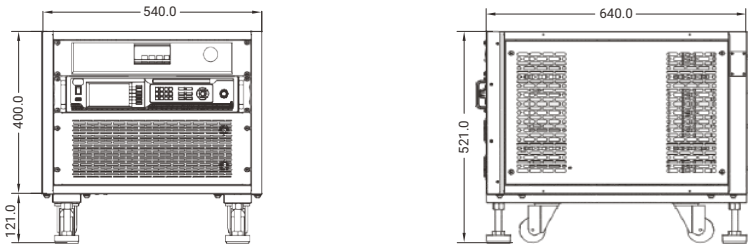


(2) GPIB interface card & cable

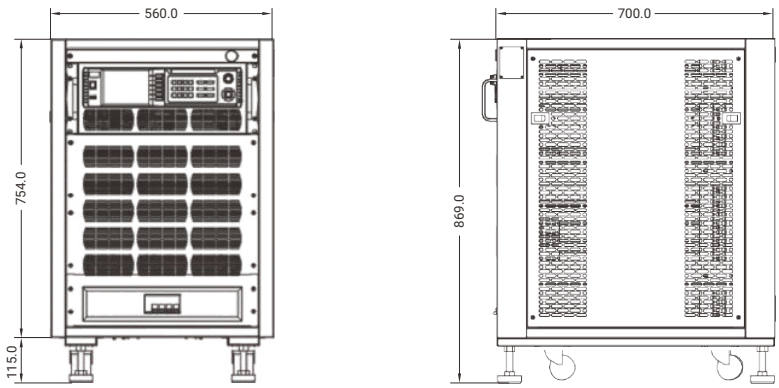


Dimension Drawing

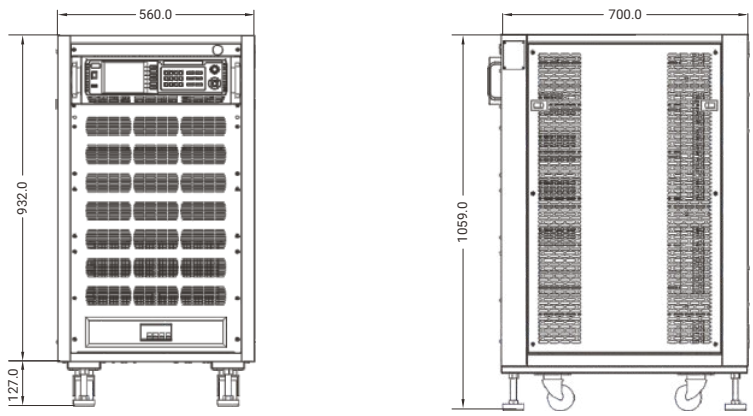
Dimension Drawing(9U) unit:mm



Dimension Drawing(17U) unit:mm



Dimension Drawing(21U) unit:mm

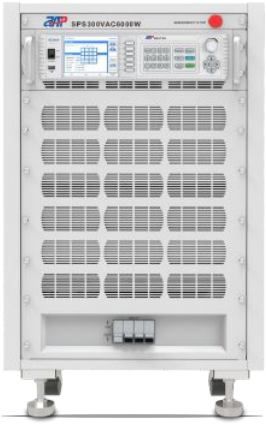


SPST Series Linked 3-Phase AC Power Supply System

It is a single 3-phase output programmable AC power supply which provides with high power density. With high speed DSP+CPLD control, high frequency PWM technology, active PFC design, It is able to provide not only stable DC/AC output power, but also 3-phase / 1-phase output. It is featured with high power density, high reliability and high precision, meanwhile it possesses operation interface of touch screen and keys manually. It is able to analog output normal or abnormal power input for electrical device to meet test requirements, which is applicable to electric, lighting, aviation sectors, etc. It could be applied to enterprise's production test as well.

(9U)1800W~4500W

Optional Information: (1)



(17U)6000W~15000W

Optional Information: (2)

Features

- Large touch color screen, possess complete functions and easy to operate.
- AC+DC mixed or independent output mode for voltage DC offset simulation.
- Capable of setting output slope/phase angle, 0~359.9°.
- Output frequency 15~1000Hz, capable of setting output slope of voltage and frequency.
- High output crest factor could satisfy surge tests requirements.
- Multiple current measuring level selection. Increase measurement accuracy.
- Standard USB data interface, support CSV file waveform import.
- OCP/OVP/OPP/OTP/ Short circuit protection.
- Built-in power meter, which is capable of measuring 15 electrical parameters per phase, including voltage, current, power, etc.
- With reverse current protection to avoid current flowing backward.
- Capable of setting voltage and current output restriction, support for constant current output mode.

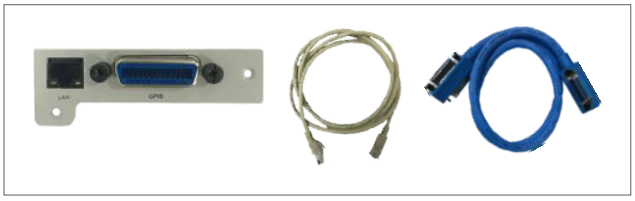
Quick Selection:

Output Voltage	Output Mode	9U Cabinet			17U Cabinet			
		1800W	3000W	4500W	6000W	9000W	12000W	15000W
150VAC/300VAC	1/3 Phase	5.6A/2.8A	9.2A/4.6A	13.8A/6.9A	16A/8A	27.6A/13.8A	32A/16A	46A/23A

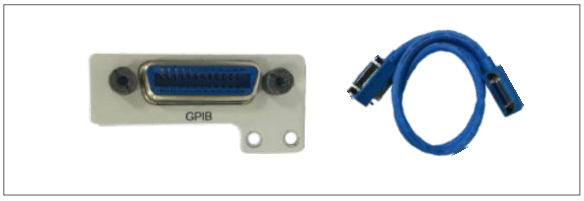
* This formula is the standard cabinet for SP-300 series 2U/3U/4U model. It is available to select cabinet with different specification according to exact situation. Detail please consults our area manager.

Optional Information

(1) LAN & GPIB interface card & cables

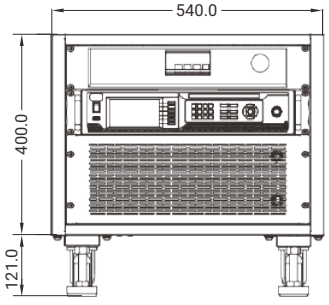


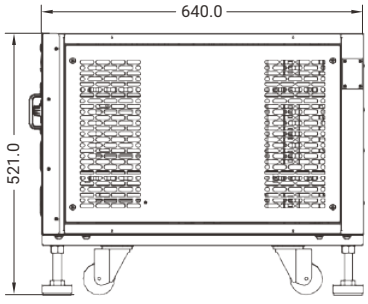
(2) GPIB interface card & cable



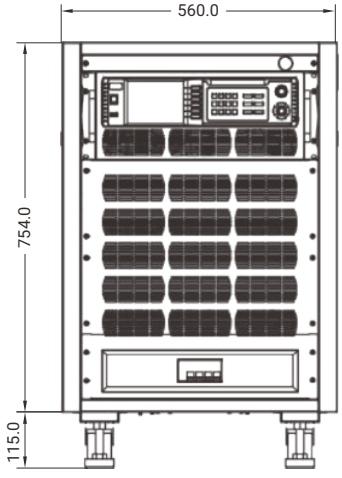
Dimension Drawing

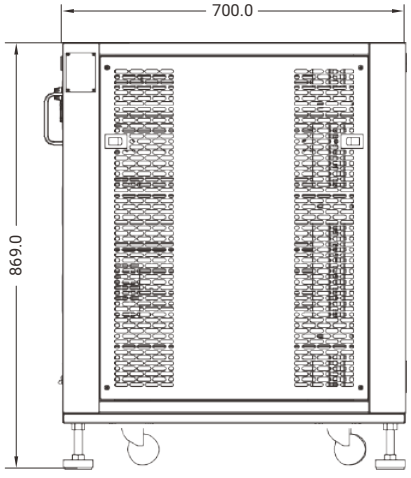
Dimension Drawing(9U) unit:mm





Dimension Drawing(17U) unit:mm





SPST Series Linked 3-Phase AC Power Supply System

MODEL		SPST300VAC1800W-2-9	SPST300VAC3000W-2-9	SPST300VAC4500W-2-9
Input				
Voltage		90~265VAC	90~265VAC	100~265VAC
Frequency		47~63Hz		
Phase		3 Phase,4Wire+Groud/Y Connect		
Max.Current		30A	45A	57A
Power Factor at 220VAC Input, Full Load		≥0.96 Active PFC	≥0.98 Active PFC	≥0.98 Active PFC
Efficiency		>81% (Peak) >80% at 220VAC, 50Hz input/220VAC, 50Hz	>85.5% (Peak) >85% at 220VAC, 50Hz input/220VAC, 50Hz	>87.5% (Peak) >87% at 220VAC, 50Hz input/220VAC, 50Hz
3-Phase Output Mode(Per Phase)				
AC Power(Total)		1800VA	3000VA	4500VA
AC Power(Per Phase)		600VA	1000VA	1500VA
Max.Current (r.m.s)	0~150V(L)	5.6A	9.2A	13.8A
	0~300V(H)	2.8A	4.6A	6.9A
Max.Current (Peak)	0~150V(L)	32.4A	55.2A	82.8A
	0~300V(H)	16.2A	27.6A	41.4A
1-Phase Output Mode				
AC Power(Total)[1]		1620VA	2700VA	4050VA
Max.Current (r.m.s)	0~150V(L)	15.12A	24.84A	37.26A
	0~300V(H)	7.56A	12.42A	18.62A
Max.Current (Peak)	0~150V(L)	87.48A	149A	223.56A
	0~300V(H)	43.47A	74.52A	111.78A
DC Power (Per Phase)		1620W	2700W	4050W
Max.Current (Total)		L 10.69A	L 17.55A	L 26.35A
		H 5.1A	H 8.9A	H 13.18A
3-Phase Output Mode(Per Phase)				
Total Harmonic Distortion (THD)		<0.5% (Resistive Load) at 15.0~70.0Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range; <1% (Resistive Load) at 70.1~500Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range; <1% (Resistive Load) at 501~1000Hz and output voltage within the 100~140VACat Low Range or the 160~280VAC at High Rang;		
Crest Factor(CF)		≤ 6		
Load Regulation		±0.2%F.S. (Resistive Load) at 15~100Hz ±0.5%F.S. (Resistive Load) at >100Hz		
Line Regulation		± 0.1V		
Voltage(AC) (L-N)	Range	0~300VAC, 150V/300V/Auto Mode		
	Resolution	0.1V		
	Accuracy	0.2% of setting +0.4%F.S at Voltage>3V		
Phase Angle (Starting /Ending)	Range	0~359.9°		
	Resolution	0.1°		
	Accuracy	± 1° @45~65Hz		
Voltage(DC)	Range	0~424VDC		
	Resolution	0.1V		
	Accuracy	0.3% of setting +0.4%F.S at Voltage>3V		
	DC Power	600W	1000W	1500W
	Max.Current	L 3.96A	L 6.5A	L 9.76A
		H 1.89A	H 3.3A	H 4.88A
	Ripple&Noise(Peak)	L <700mVrms @Bandwidth 20Hz to 1MHz	H <1100mVrms @Bandwidth 20Hz to 1MHz	
	Ripple&Noise(r.m.s)	<4000mVp-p @Bandwidth 20Hz to 1MHz		
Current OC Fold Mode	Resolution	0.01A		
	Accuracy	0.5% of setting +1.0%F.S.		
	Response Time	<1400ms		
Frequency	Range	15~1000Hz		
	Resolution	0.1Hz(15.0~99.9Hz), 1Hz(100~1000Hz)		
	Accuracy	0.03% of setting		
Programmable Output Impedance		Not Support		
Harmonic & Interharmonics Simulation		Not Support		
Power Meter Function(Per Phase)				
Voltage	Range	AC 0~300VAC		
		DC 0~424VDC		
	Resolution	0.1V		
	Accuracy	0.2% of setting +0.4%F.S. (Peak: 0.6% of setting +1%F.S.)		

MODEL		SPST300VAC1800W-2-9	SPST300VAC3000W-2-9	SPST300VAC4500W-2-9
Frequency	Range	15~1000Hz		
	Resolution	0.1Hz(15.0~99.9Hz),1Hz(100~1000Hz)		
	Accuracy	0.1% of setting		
Current[2] (r.m.s)	Range	H 0.15A~5.6A	H 0.3A~9.2A	H 0.3A~13.8A
		L 0.1A~3A	L 0.1A~3A	L 0.1A~3A
	Resolution	0.01A		
	Accuracy	0.4%+1.0%F.S.		
Current[2] (Peak)	Range	0A~32.4A	0A~55.2A	0A~82.8A
	Resolution	0.01A		
	Accuracy	0.4%+1.5%F.S.		
Power	Range	0~612W	0~1020W	0~1530W
	Resolution	0.1W		
	Accuracy	0.4% of setting +0.3%F.S. at PF>0.2, Voltage >5V		
Power Apparent(VA)	Range	0~612VA	0~1020VA	0~1530VA
	Resolution	0.1VA		
	Accuracy	Voltage*Irms, Calculated value		
Power Resistive (VAR)	Range	0~612VAR	0~1020VAR	0~1530VAR
	Resolution	0.1VAR		
	Accuracy	$\sqrt{(VA)^2-(W)^2}$, Calculated value		
Power Factor (PF)	Range	0.00~1.00		
	Resolution	0.01		
	Accuracy	W/VA, Calculated value		
Harmonic	Range	Not Support		
Extra Function				
Slew Rate	Range	AC Voltage 0.001~1200.000V/ms and Disable		
		DC Voltage 0.001~1000.000V/ms and Disable		
		Frequency 0.001~1600.000Hz/ms and Disable		
Remote Sense	Range	5V(rms), Max. Total power less than rated power		
Calibration		Firmware-based calibration through the digital interface or front panel display		
Test Function		Not Support		
Graphic Display		4.3" Color touch LCD		
Operation Key Feature		Soft key, Numberic key, Rotary Knob, USB port for transfer and upgrading firmware		
Rack mount Handles		Yes		
FAN		Temperature Control		
Protection Circuits		OCP, OVP, OPP, OTP, RCP, PRI_UVP, PRI_OVP, PRI_OTP, PRI_OCP, USB_OCP		
Interface		USB, RS485, RS232, LAN(Option); GPIB(Option)		
Environmental				
Operating Temperature		0°C~40°C		
Storage Temperature		-40°C~85°C		
Altitude		2000m		
Relative Humidity		5%~95%, non-condensing		
Temperature Coefficient		100ppm/°C at Voltage, 300ppm/°C at Current,100ppm/°C at Frequency		
Mechanical				
Dimensions(W*H*D)		540.0*400.0*640.0 mm		
Package Dimensions (W*H*D)		660.0*710.0*760.0 mm		
Unit Weight		88.7kg		
Shipping Weight		108.7kg		
Regulatory Compliance				
CE Mark		Installation Overvoltage Category II;Class II equipment;indoor use only.		

[1] In single phase mode, the current shall be reduced to 90% for the consideration of current sharing.

[2] The tolerance will change slightly in high frequency condition;

All specifications are subject to change without notice.

SPST Series Linked 3-Phase AC Power Supply System

MODEL		SPST300VAC6000W-3-17	SPST300VAC9000W-4-17	SPST300VAC12000W-4-17	SPST300VAC15000W-4-17
Input					
Voltage		190~265VAC			
Frequency		47~63Hz			
Phase		3 Phase,4Wire+Groud/Y Connect			
Max.Current		42A	60A	75A	90A
Power Factor at 220VAC Input,Full Load		⩾0.99 Active PFC	⩾0.98 Active PFC	⩾0.99 Active PFC	⩾0.99 Active PFC
Efficiency		>87% (Peak) >86% at 220VAC, 50Hz input/230VAC, 50Hz output, Full Load	>86% (Peak) >85% at 220VAC, 50Hz input/230VAC, 50Hz output, Full Load	>87% (Peak) >86% at 220VAC, 50Hz input/230VAC, 50Hz output, Full Load	>87% (Peak) >86% at 220VAC, 50Hz input/230VAC, 50Hz output, Full Load
3-Phase Output Mode(Per Phase)					
AC Power(Total)		6000VA	9000VA	12000VA	15000VA
AC Power(Per Phase)		2000VA	3000VA	4000VA	5000VA
Max.Current (r.m.s)	0~150V(L)	16A	27.6A	32A	46A
	0~300V(H)	8A	13.8A	16A	23A
Max.Current (Peak)	0~150V(L)	80A	165.6A	160A	184A
	0~300V(H)	40A	82.8A	80A	92A
1-Phase Output Mode					
AC Power(Total)[1]		5400VA	8100VA	10800VA	13500VA
Max.Current (r.m.s)	0~150V(L)	43.2A	74.52A	86.4A	124.2A
	0~300V(H)	21.6A	37.26A	43.2A	62.1A
Max.Current (Peak)	0~150V(L)	216A	447.12A	432A	496.8A
	0~300V(H)	108A	223.56A	216A	248.4A
DC Power (Per Phase)		5400W	8100W	10800W	13500W
Max.Current (Total)		L 30.51A	L 52.92A	L 61A	L 88A
		H 15.26A	H 26.46A	H 30.51A	H 44A
3-Phase Output Mode(Per Phase)					
Total Harmonic Distortion (THD)		<0.5% (Resistive Load) at 15.0~70.0Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range; <1% (Resistive Load) at 70.1~500Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range; <1% (Resistive Load) at 501~1000Hz and output voltage within the 100~140VACat Low Range or the 160~280VAC at High Rang;			
Crest Factor(CF)		⩽5	⩽6	⩽5	⩽4
Load Regulation		±0.2%F.S. (Resistive Load) at 15~100Hz ±0.5%F.S. (Resistive Load) at >100Hz			
Line Regulation		± 0.1V			
Voltage(AC) (L-N)	Range	0~300VAC, 150V/300V/Auto Mode			
	Resolution	0.1V			
	Accuracy	0.2% of setting +0.4%F.S at Voltage>3V			
Phase Angle (Starting /Ending)	Range	0~359.9°			
	Resolution	0.1°			
	Accuracy	± 1° @45~65Hz			
Voltage(DC)	Range	0~424VDC			
	Resolution	0.1V			
	Accuracy	0.3% of setting +0.4%F.S at Voltage>3V			
	DC Power	2000W	3000W	4000W	5000W
	Max.Current	L 11.3A	L 19.6A	L 22.6A	L 32.6A
		H 5.65A	H 9.8A	H 11.3A	H 16.3A
	Ripple&Noise(Peak)	L <700mVrms @Bandwidth 20Hz to 1MHz		H <1100mVrms @Bandwidth 20Hz to 1MHz	
	Ripple&Noise(r.m.s)	<4000mVp-p @Bandwidth 20Hz to 1MHz			
Current CC Fold Mode	Resolution	0.01A			
	Accuracy	2.0% of setting +1.0%F.S.			
	Response Time	<1400ms			
Frequency	Range	15~1000Hz			
	Resolution	0.1Hz(15.0~99.9Hz),1Hz(100~1000Hz)			
	Accuracy	0.03% of setting			
Programmable Output Impedance		Not Support			
Harmonic & Interharmonics Simulation		Not Support			
Power Meter Function(Per Phase)					
Voltage	Range	AC 0~300VAC			
		DC 0~424VDC			
	Resolution	0.1V			
	Accuracy	0.2% of setting +0.4%F.S. (Peak: 0.6% of setting +1%F.S.)			

MODEL		SPST300VAC6000W-3-17	SPST300VAC9000W-4-17	SPST300VAC12000W-4-17	SPST300VAC15000W-4-17
Frequency	Range	15~1000Hz			
	Resolution	0.1Hz(15.0~99.9Hz),1Hz(100~1000Hz)			
	Accuracy	0.1% of setting			
Current[2] (r.m.s)	Range	H 0.15A~20A	H 0.3A~27.6A	H 0.3A~32A	H 0.3A~46A
		M -	M 0.2A~20A	M 0.2A~20A	M 0.2A~20A
		L 0.1A~5A	L 0.1A~5A	L 0.1A~5A	L 0.1A~5A
		mA 0.02A~1.5A	mA 0.02A~1.5A	mA 0.02A~1.5A	mA 0.02A~1.5A
	Resolution	0.01A			
	Accuracy	0.4%+1.0%F.S.			
Current[2] (Peak)	Range	0A~81.5A	0A~168.6A	0A~163A	0A~188A
	Resolution	0.01A			
	Accuracy	0.4%+1.5%F.S.			
Power	Range	0~2040W	0~3060W	0~4080W	0~5100W
	Resolution	0.1W			
	Accuracy	0.4% of setting +0.3%F.S. at PF>0.2, Voltage >5V			
Power Apparent(VA)	Range	0~2040VA	0~3060VA	0~4080VA	0~5100VA
	Resolution	0.1VA			
	Accuracy	Voltage*Irms, Calculated value			
Power Resistive (VAR)	Range	0~2040VAR	0~3060VAR	0~4080VAR	0~5100VAR
	Resolution	0.1VAR			
	Accuracy	$\sqrt{(VA)^2-(W)^2}$, Calculated value			
Power Factor (PF)	Range	0.00~1.00			
	Resolution	0.01			
	Accuracy	W/VA, Calculated value			
Harmonic	Range	Not Support			
Extra Function					
Slew Rate	Range	AC Voltage 0.001~1200.000V/ms and Disable			
		DC Voltage 0.001~1000.000V/ms and Disable			
		Frequency 0.001~1600.000Hz/ms and Disable			
Remote Sense	Range	5V(rms), Max. Total power less than rated power			
Calibration		Firmware-based calibration through the digital interface or front panel display			
Test Function		Not Support			
Graphic Display		5.6" Color touch LCD			
Operation Key Feature		Soft key, Numberic key, Rotary Knob, USB port for transfer and upgrading firmware			
Rack mount Handles		Yes			
FAN		Temperature Control			
Protection Circuits		OCP, OVP, OPP, OTP, RCP, PRI_UVP, PRI_OVP, PRI_OTP, PRI_OCP, USB_OCP			
Interface		USB, RS485, RS232, LAN(Standard); GPIB(Option)			
Environmental					
Operating Temperature		0°C~40°C			
Storage Temperature		-40°C~85°C			
Altitude		2000m			
Relative Humidity		5%~95%, non-condensing			
Temperature Coefficient		100ppm/°C at Voltage, 300ppm/°C at Current,100ppm/°C at Frequency			
Mechanical					
Dimensions(W*H*D)		560.0*754.0*700.0 mm			
Package Dimensions (W*H*D)		680.0*1146.0*820.0 mm			
Unit Weight		134.0kg	157.0kg	157.0kg	157.0kg
Shipping Weight		173.0kg	195.0kg	195.0kg	195.0kg
Regulatory Compliance					
CE Mark		Installation Overvoltage Category II;Class II equipment;indoor use only.			

[1] In single phase mode, the current shall be reduced to 90% for the consideration of current sharing.

[2] The tolerance will change slightly in high frequency condition;

All specifications are subject to change without notice.

EL Series
High-density Programmable DC Electronic Load

This series High-density Programmable DC Electronic Load provides three voltage ranges 200V/600V/1200V. Supports CV, CC, CR and CP these 4 basic operating modes, as well as CV+CC, CV+CR, CR+CC these 3 complex operating modes. Full protection includings OCP, OPP, OTP, over voltage and reverse alarm. Support external control and monitor mode, the 0 to 10V input or output signal represent 0 to full range voltage or current. Provide OCP test, OPP test and Short circuit simulation to effectively solve the application demands for power and automated testing. Built-in RS232, RS485 and USB communication interfaces, LAN&GPIB communication card is optional. Two or more loads can be connected in master-slave parallel mode to provide more power or current capacity. This series DC load can be applied to battery discharge, DC charging station and power electronics and other electronics products.

2U 3U 4U 7U 10U 13U

Features

- Flippable front panel and color touch screen allow convenient access and operation.
- Provides four kinds of basic working mode such as CV/CC/CR/CP, and CV+CC/CV+CR/CR+CC complex operating modes.
- Adjustable current slew rate, adjustable CV loop speed.
- Ultra high precision voltage & current measurement.
- OCP/OPP testing function.
- 50kHz high-speed CC/CR dynamic mode.
- 500kHz high-speed voltage and current sampling rate.
- Timing & discharging measurement for batteries.
- Short circuit test mode.
- Auto mode function provides an easy way to do complicated test.
- Dynamic frequency sweep function for determining worst case voltage peaks.*
- Non linear load mode function makes the simulated loading current more realistic.*
- Supports external analog control function
- V-monitor/I-monitor.
- LED load simulation function.
- Full protection: OCP, OPP, OTP, over voltage and reverse alarm.
- Up to 20 units master/slave parallel control.
- Front panel USB interface supports data import and export.
- SCPI language and standard rack size make it ideal for ATE System integration.
- Smart fan control with lower noise and better for environment.
- Multi versions to meet the cost performance and different applications.

* Only professional Electronic Load units support these functions.

Quick Selection:

Input Voltage	2U					3U			4U
	600W	1200W	1800W	2400W	3000W	3400W	4400W	5600W	6600W
200VDC	60A	130A	190A	260A	320A	370A	480A	610A	720A
600VDC	40A	90A	130A	180A	220A	250A	320A	410A	480A
1200VDC	*	45A	*	90A	*	125A	160A	205A	240A
Input Voltage	**7U**			**10U**			**13U**		
	8800W	**11000W**	**13200W**	**15400W**	**17600W**	**19800W**	**22000W**	**24200W**	**26400W**
200VDC	960A	1200A	1440A	1680A	1920A	2160A	2400A	2640A	2880A
600VDC	640A	800A	960A	1120A	1280A	1440A	1600A	1760A	1920A
1200VDC	320A	400A	480A	560A	640A	720A	800A	880A	960A

* Custom master slave system could extend to 528KW(20 units 26.4KW E-load parallel connect).

Optional Information

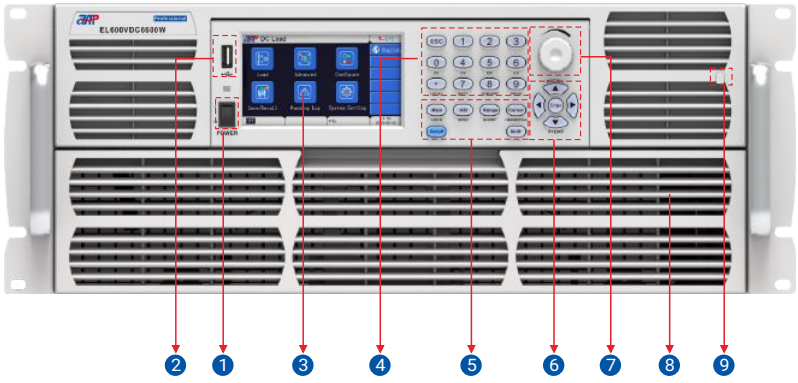
(1) LAN & GPIB interface card & cables



Panel Introduction

Front Panel Description

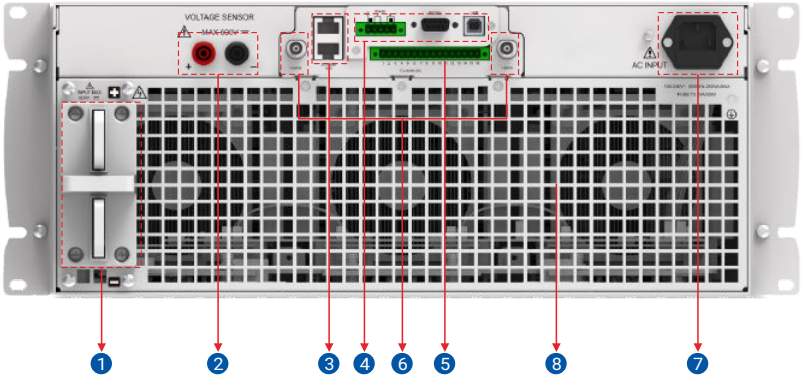
1. Power switch
2. USB host, for data import and export
3. Color touch screen
4. Numeric keys and function keys
5. Function keys and multifunction keys
6. Enter key and arrow keys
7. Push-on knob, for editing parameter and moving the location of cursor
8. Ventilation holes
9. Stylus



Rear Panel Description

1. Load positive/negative terminal
2. Remote sense connections
3. System Bus, for mater/slave system data transmission
4. RS485/RS232/USB communication Interface (standard), LAN&GPIB communication Interface (optional)*
5. External TTL/Analog control Interface
6. V-monitor/I-monitor
7. AC input connector
8. Ventilation holes

* When LAN&GPIB interface card selected it will be installed here instead of RS485/RS232/USB interface card.



Function Introduction

Flippable Front Panel and Color Touch Screen

This series programmable DC electronic load is equipped with flippable front panel for 4U, 7U, 10U and 13U height models. Together with a large color touch screen provides simple and fast operation for customer. Real-time update of display input data, status and graphical display makes it more intuitive.

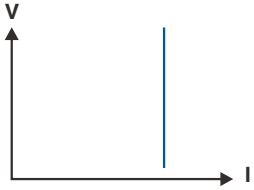
Multiple Operating Mode

Basic Operating Mode

This series programmable DC electronic load provides four kinds of basic operating mode including CV (constant voltage), CC (constant current), CR (constant resistance), CP (constant power), to satisfy a wide range of test requirements.

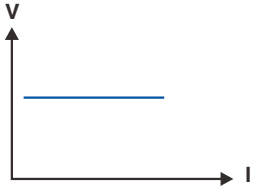
CC Mode

1. Load regulation test of DC power supply
2. Discharge time and life test for battery
3. Fuel cells test
4. Loading test for DC motor



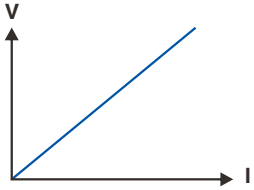
CV Mode

1. Charging station test
2. Current limit testing for Fold back type power supply
3. Fuel cells test
4. Current source test



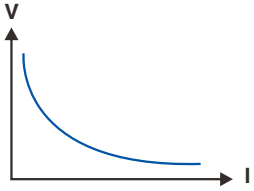
CR Mode

1. Slow start test for communication power supply
2. LED driver test
3. Loading test for automobile temperature controller



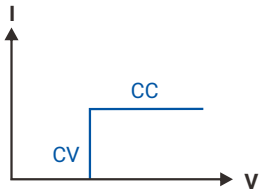
CP Mode

1. Testing for contanst power type power supply
2. Capacity and life test for battery

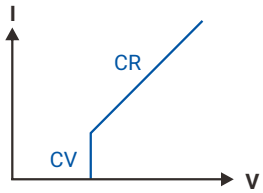


Complex Operating Mode

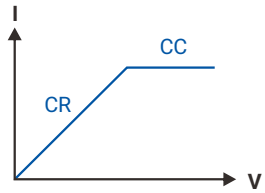
The CV+CC mode can be applied to the load simulation battery and test the charging station or the car charger.



The CV+CR mode can be used to simulate the dynamic characteristics of LED.

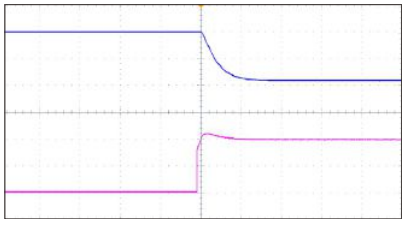


The CR+CC mode is suitable for power on testing.

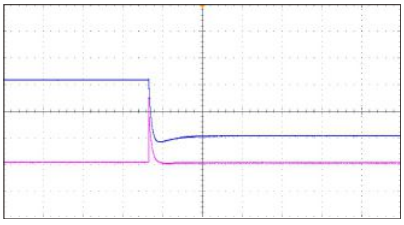


Adjustable CV Loop Speed

This series electronic load supports CV loop response speed setting to VerySlow, Slow, Normal, Fast and VeryFast to satisfy different test requirements. This function may avoid the inaccurate measurement or testing fail caused by the response speed mismatch between the load and the power supply, which is possible to improve test efficiency and reduce costs on the equipments, time and expenses.



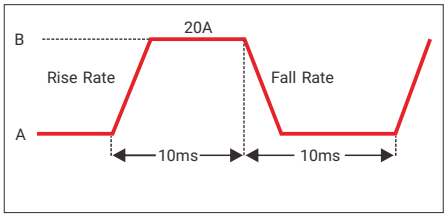
Slow speed of CV loop



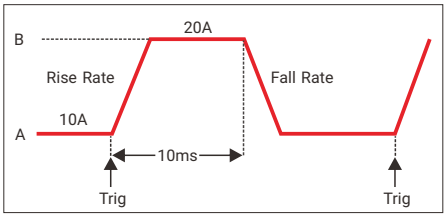
Normal speed of CV loop

Dynamic Load

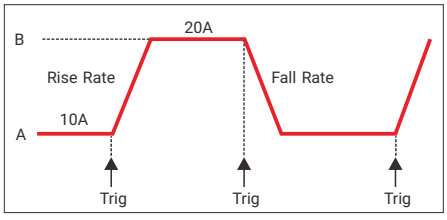
This series electronic load can be switched quickly between different values in the same operating mode, including CC dynamic mode, CV dynamic mode, CR dynamic mode and CP dynamic mode, CC/CR high speed dynamic mode up to 50kHz.
This function is suitable for transient test of power supply, test of battery protection characteristic and battery pulse charging etc.
Dynamic mode test has continuous mode, pulse mode and toggle mode.



Continous Mode



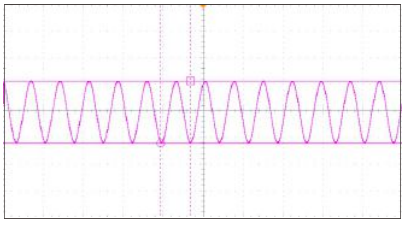
Pulse Mode



Toggle Mode

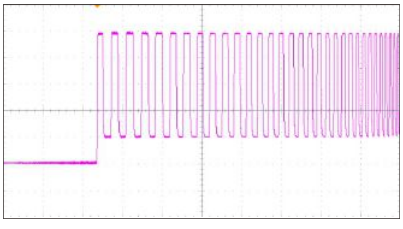
Sine Wave Dynamic Load

This series electronic load supports sine wave loading function which allows to load sine wave, can be used for impedance analysis test of fuel cells.



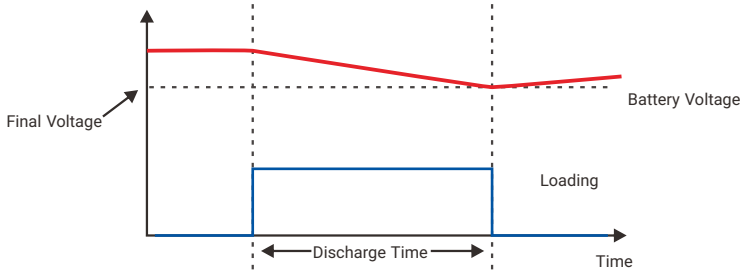
Dynamic Frequency Sweep Function

This series electronic load provides a unique constant current dynamic sweep to use frequency conversion to find out the UUT voltage of worst case.
This CC dynamic sweep allows the user to edit two load levels, start frequency, end frequency, step frequency, dwell etc.
The sampling rate is up to 500kHz, which make it can simulate different loading conditions for most test requirements.



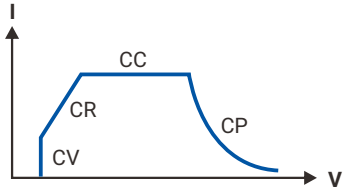
Battery Discharge Test

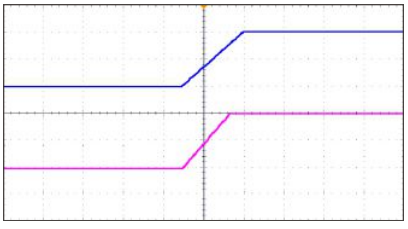
This series electronic load has battery discharge function, and can perform discharge test under CC, CR or CP mode. The DC load can set end volatge or time to stop loading correctly and make sure the battery is not damaged due to over discharge. The user can set stop conditions, whenever met any condition, the load will stop loading and counting automatically. During the test, users can observe battery's voltage, discharging time and already-discharged-capacity.



Auto Mode

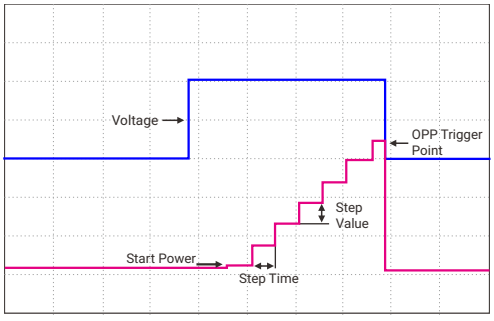
This mode allows automatically switches among CV, CR, CC and CP modes. It is suitable for lithium ion battery charger testing to get a complete V-I charging curve. This flexible auto mode also enormously improve test efficiency.





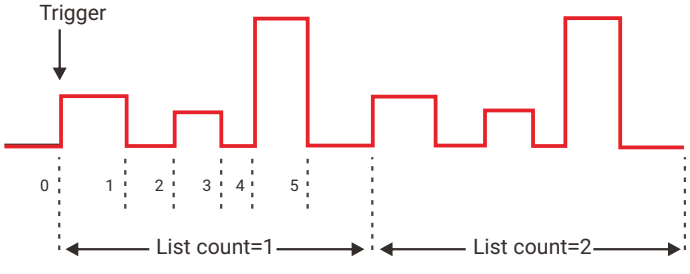
OCP/OPP Tests

This series electronic load provides OCP and OPP modes are mainly applied in over-current and over-power points tests. After the testing the load can automatically judge the test result according to the set specifications. Take OPP testing as example, the OPP provides ramped up power for the load to test the UUT voltage whether has reached trigger voltage level and to judge if the protection is acting normally or not.



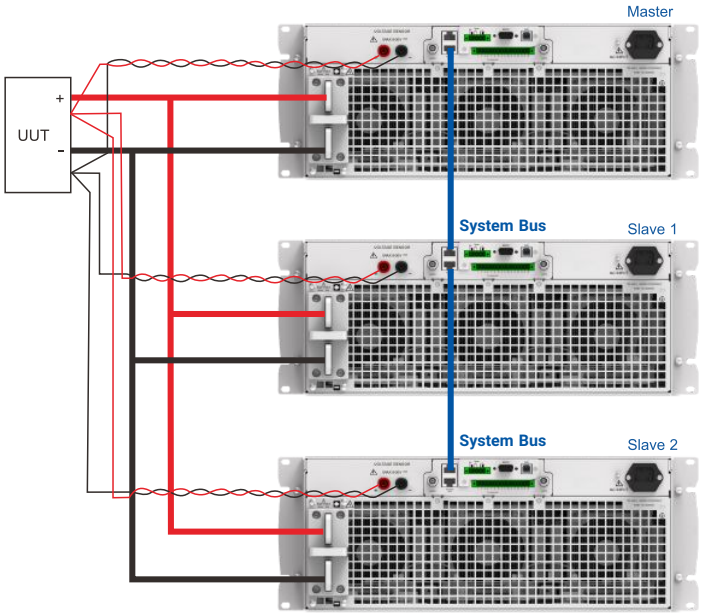
List Mode

The list function allows user to create waveform files to automatically simulate various complicated loading conditions. The list mode has 10 files, by editing operating mode (including CC, CV, CR, CP, Short and ON/OFF), repeat times, total steps, setting value of each step and step time etc. This function can be applied to the testing of output characteristic and stability for power supply.



Master/Slave Control

This series electronic load provides the user with Master/slave mode, supports parallel connection under different power and same voltage and dynamically synchronized. In Master/slave mode, the user only need to control the master one, the load current will be automatically calculated and downloaded to the slave loads. The Master/slave mode greatly simplifies the operation when increased power is needed.



External Control and Current/Voltage Monitoring

This series electronic load has analog control interface to control the input voltage and current. The external signal 0 to 10V controls the sinking condition from 0 to full scale. Using the external control mode can simulate arbitrary waveform which is ideal for industrial control requirement.
The 0 to 10V analog output signal of V-MON/I-MON terminals represent input to which the terminals belong from 0 to full range. An external voltmeter or oscilloscope can be connected to display input voltage/current change.

Applications


New energy


Automotive electronics


Electronic component


Power supply


Battery charge/discharge test


ATE systems


R/D design verification/quality assurance


Factory production online test

EL Series Programmable DC Electronic Load

MODEL		EL200VDC600W			EL200VDC1200W		
Rated	Voltage	0~200V			0~200V		
	Current	0~60A			0~130A		
	Power	0~600W			0~1200W		
	Min. Operating Voltage	0.18V@6A	0.9V@30A	1.8V@60A	0.18V@13A	0.9V@65A	1.8V@130A
Static Mode							
Constant Current Mode	Range	0~6A	0~30A	0~60A	0~13A	0~65A	0~130A
	Resolution	0.1mA	0.5mA	2mA	0.1mA	0.5mA	2mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~60W	0~300W	0~600W	0~120W	0~600W	0~1200W
	Resolution	1mW	5mW	10mW	2mW	10mW	20mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	50mΩ~500Ω(16V)	200mΩ~2000Ω(80V)	5000mΩ~5000Ω(200V)	30mΩ~300Ω(16V)	120mΩ~1200Ω(80V)	3000mΩ~6000Ω(200V)
	Resolution	50mΩ(16V)	200mΩ(80V)	5000mΩ(200V)	30mΩ(16V)	120mΩ(80V)	3000mΩ(200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.1mA/μs~0.24A/μs	0.5mA/μs~1.2A/μs	2mA/μs~2.4A/μs	0.1mA/μs~1.2A/μs	0.5mA/μs~3.6A/μs	2mA/μs~7.2A/μs
	Slew Rate(Adv.)	0.1mA/μs~0.06A/μs	0.5mA/μs~0.3A/μs	2mA/μs~0.6A/μs	0.1mA/μs~0.13A/μs	0.5mA/μs~0.65A/μs	2mA/μs~1.3A/μs
	Min. Rise Time(Pro.)	10μs(Typical)			10μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.1mA/μs	0.5mA/μs	2mA/μs	0.1mA/μs	0.5mA/μs	2mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	1mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~6A	0~30A	0~60A	0~13A	0~65A	0~130A
	Resolution	0.1mA	0.5mA	2mA	0.1mA	0.5mA	2mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~60W	0~300W	0~600W	0~120W	0~600W	0~1200W
	Resolution	1mW	5mW	10mW	2mW	10mW	20mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		17.6V	88V	220V	17.6V	88V	220V
OCP		6.12A	30.6A	61.2A	13.26A	66.3A	132.6A
OPP		61.8W	309W	618W	123.6W	618W	1236W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x88.0x610.0mm			423.0x88.0x610.0 mm		
Package Dimensions(WxHxD)		665.0x333.0x918.0mm			665.0x333.0x918.0 mm		
Unit Weight		18kg			20kg		
Shipping Weight		27kg			29kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		100VA			105VA		
Fuse		2.5A			2.5A		

MODEL		EL200VDC1800W			EL200VDC2400W		
Rated	Voltage	0~200V			0~200V		
	Current	0~190A			0~260A		
	Power	0~1800W			0~2400W		
	Min. Operating Voltage	0.18V@19A	0.9V@95A	1.8V@190A	0.18V@26A	0.9V@130A	1.8V@260A
Static Mode							
Constant Current Mode	Range	0~19A	0~95A	0~190A	0~26A	0~130A	0~260A
	Resolution	0.1mA	0.5mA	2mA	0.5mA	2mA	5mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~180W	0~900W	0~1800W	0~240W	0~1200W	0~2400W
	Resolution	2mW	10mW	20mW	5mW	25mW	50mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	20mΩ~200Ω(16V)	80mΩ~800Ω(80V)	2000mΩ~4000Ω(200V)	15mΩ~150Ω(16V)	60mΩ~600Ω(80V)	1500mΩ~3000Ω(200V)
	Resolution	20mΩ(16V)	80mΩ(80V)	2000mΩ(200V)	15mΩ(16V)	60mΩ(80V)	1500mΩ(200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.1mA/μs~1.8A/μs	0.5mA/μs~4.8A/μs	2mA/μs~9.6A/μs	0.5mA/μs~2.5A/μs	2mA/μs~7.5A/μs	5mA/μs~15A/μs
	Slew Rate(Adv.)	0.1mA/μs~0.19A/μs	0.5mA/μs~0.95A/μs	2mA/μs~1.9A/μs	0.5mA/μs~0.26A/μs	2mA/μs~1.3A/μs	5mA/μs~2.6A/μs
	Min. Rise Time(Pro.)	10μs(Typical)			10μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.1mA/μs	0.5mA/μs	2mA/μs	0.5mA/μs	2mA/μs	5mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~19A	0~95A	0~190A	0~26A	0~130A	0~260A
	Resolution	0.1mA	0.5mA	2mA	0.5mA	2mA	5mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~180W	0~900W	0~1800W	0~240W	0~1200W	0~2400W
	Resolution	2mW	10mW	20mW	5mW	25mW	50mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		17.6V	88V	220V	17.6V	88V	220V
OCP		19.38A	96.9A	193.8A	26.52A	132.6A	265.2A
OPP		185.4W	927W	1854W	247.2W	1236W	2472W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x88.0x610.0 mm			423.0x88.0x610.0 mm		
Package Dimensions(WxHxD)		665.0x333.0x918.0 mm			665.0x333.0x918.0 mm		
Unit Weight		22kg			24kg		
Shipping Weight		31kg			33kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		125VA			144VA		
Fuse		2.5A			2.5A		

MODEL		EL200VDC3000W			EL200VDC3400W		
Rated	Voltage	0~200V			0~200V		
	Current	0~320A			0~370A		
	Power	0~3000W			0~3400W		
	Min. Operating Voltage	0.18V@32A	0.9V@160A	1.8V@280A	0.18V@37A	0.9V@185A	1.8V@370A
Static Mode							
Constant Current Mode	Range	0~32A	0~160A	0~320A	0~37A	0~185A	0~370A
	Resolution	0.5mA	2mA	5mA	0.5mA	2mA	5mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~300W	0~1500W	0~3000W	0~340W	0~1700W	0~3400W
	Resolution	5mW	25mW	50mW	10mW	50mW	100mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	10mΩ~100Ω(16V)	40mΩ~400Ω(80V)	500mΩ~1000Ω(200V)	10mΩ~100Ω(16V)	40mΩ~400Ω(80V)	1000mΩ~2000Ω(200V)
	Resolution	10mΩ(16V)	40mΩ(80V)	1000mΩ(200V)	10mΩ(16V)	40mΩ(80V)	1000mΩ(200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.5mA/μs~3A/μs	2mA/μs~9A/μs	5mA/μs~18A/μs	0.5mA/μs~3.5A/μs	2mA/μs~10A/μs	5mA/μs~20A/μs
	Slew Rate(Adv.)	0.5mA/μs~0.32A/μs	2mA/μs~1.6A/μs	5mA/μs~3.2A/μs	0.5mA/μs~0.37A/μs	2mA/μs~1.85A/μs	5mA/μs~3.7A/μs
	Min. Rise Time(Pro.)	10μs(Typical)			10μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.5mA/μs	2mA/μs	5mA/μs	0.5mA/μs	2mA/μs	5mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~32A	0~160A	0~320A	0~37A	0~185A	0~370A
	Resolution	0.5mA	2mA	5mA	0.5mA	2mA	5mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~300W	0~1500W	0~3000W	0~340W	0~1700W	0~3400W
	Resolution	5mW	25mW	50mW	10mW	50mW	100mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		17.6V	88V	220V	17.6V	88V	220V
OCP		32.64A	163.2A	326.4A	37.74A	188.7A	377.4A
OPP		309W	1545W	3090W	350.2W	1751W	3502W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x88.0x610.0 mm			423.0x133.0x610.0 mm		
Package Dimensions(WxHxD)		665.0x333.0x918.0 mm			665.0x348.0x918.0 mm		
Unit Weight		26kg			27kg		
Shipping Weight		35kg			36kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		152VA			203VA		
Fuse		2.5A			2.5A		

MODEL		EL200VDC4400W			EL200VDC5600W		
Rated	Voltage	0~200V			0~200V		
	Current	0~480A			0~610A		
	Power	0~4400W			0~5600W		
	Min. Operating Voltage	0.18V@48A	0.9V@240A	1.8V@480A	0.18V@61A	0.9V@305A	1.8V@610A
Static Mode							
Constant Current Mode	Range	0~48A	0~240A	0~480A	0~61A	0~305A	0~610A
	Resolution	0.5mA	2mA	5mA	0.5mA	2mA	5mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~440W	0~2200W	0~4400W	0~560W	0~2800W	0~5600W
	Resolution	10mW	50mW	100mW	10mW	50mW	100mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	7.5mΩ~75Ω(16V)	30mΩ~300Ω(80V)	750mΩ~1500Ω(200V)	7.5mΩ~75Ω(16V)	30mΩ~300Ω(80V)	750mΩ~1500Ω(200V)
	Resolution	7.5mΩ(16V)	30mΩ(80V)	750mΩ(200V)	7.5mΩ(16V)	30mΩ(80V)	750mΩ(200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.5mA/μs~4.5A/μs	2mA/μs~12A/μs	5mA/μs~24A/μs	0.5mA/μs~5.6A/μs	2mA/μs~16A/μs	5mA/μs~32A/μs
	Slew Rate(Adv.)	0.5mA/μs~0.48A/μs	2mA/μs~2.4A/μs	5mA/μs~4.8A/μs	0.5mA/μs~0.61A/μs	2mA/μs~3.05A/μs	5mA/μs~6.1A/μs
	Min. Rise Time(Pro.)	10μs(Typical)			10μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.5mA/μs	2mA/μs	5mA/μs	0.5mA/μs	2mA/μs	5mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~48A	0~240A	0~480A	0~61A	0~305A	0~610A
	Resolution	0.5mA	2mA	5mA	0.5mA	2mA	5mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~440W	0~2200W	0~4400W	0~560W	0~2800W	0~5600W
	Resolution	10mW	50mW	100mW	10mW	50mW	100mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		17.6V	88V	220V	17.6V	88V	220V
OCP		48.96A	244.8A	489.6A	62.22A	311.1A	622.2A
OPP		453.2W	2266W	4532W	576.8W	2884W	5768W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x133.0x610.0 mm			423.0x133.0x610.0 mm		
Package Dimensions(WxHxD)		665.0x348.0x918.0 mm			665.0x348.0x918.0 mm		
Unit Weight		28.5kg			32.5kg		
Shipping Weight		37.5kg			41.5kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		223VA			252VA		
Fuse		2.5A			2.5A		

MODEL		EL200VDC6600W			EL200VDC8800W		
Rated	Voltage	0~200V			0~200V		
	Current	0~720A			0~960A		
	Power	0~6600W			0~8800W		
	Min. Operating Voltage	0.18V@72A	0.9V@360A	1.8V@720A	0.18V@96A	0.9V@480A	1.8V@960A
Static Mode							
Constant Current Mode	Range	0~72A	0~360A	0~720A	0~96A	0~480A	0~960A
	Resolution	0.5mA	2mA	5mA	1mA	5mA	10mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~660W	0~3300W	0~6600W	0~880W	0~4400W	0~8800W
	Resolution	10mW	50mW	100mW	20mW	100mW	200mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	5mΩ~50Ω(16V)	20mΩ~200Ω(80V)	500mΩ~1000Ω(200V)	4mΩ~40Ω(16V)	15mΩ~150Ω(80V)	375mΩ~750Ω(200V)
	Resolution	5mΩ(16V)	20mΩ(80V)	500mΩ(200V)	4mΩ(16V)	15mΩ(80V)	375mΩ(200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.5mA/μs~6A/μs	2mA/μs~18A/μs	5mA/μs~36A/μs	1mA/μs~7.2A/μs	5mA/μs~21A/μs	10mA/μs~42A/μs
	Slew Rate(Adv.)	0.5mA/μs~0.72A/μs	2mA/μs~3.6A/μs	5mA/μs~7.2A/μs	1mA/μs~0.96A/μs	5mA/μs~4.8A/μs	10mA/μs~9.6A/μs
	Min. Rise Time(Pro.)	10μs(Typical)			10μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.5mA/μs	2mA/μs	5mA/μs	1mA/μs	5mA/μs	10mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~72A	0~360A	0~720A	0~96A	0~480A	0~960A
	Resolution	0.5mA	2mA	5mA	1mA	5mA	10mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~660W	0~3300W	0~6600W	0~880W	0~4400W	0~8800W
	Resolution	10mW	50mW	100mW	20mW	100mW	200mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		17.6V	88V	220V	17.6V	88V	220V
OCP		73.44A	367.2A	734.4A	97.92A	489.6A	979.2A
OPP		679.8W	3399W	6798W	906.4W	4532W	9064W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x177.0x610.0 mm			423.0x311.0x670.0 mm		
Package Dimensions(WxHxD)		665.0x392.0x918.0 mm			541.0x591.0x891.0 mm		
Unit Weight		38kg			61.5kg		
Shipping Weight		47kg			81.5kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		285VA			450VA		
Fuse		3.15A			5A		

MODEL		EL200VDC11000W			EL200VDC13200W		
Rated	Voltage	0~200V			0~200V		
	Current	0~1200A			0~1440A		
	Power	0~11000W			0~13200W		
	Min. Operating Voltage	0.18V@120A	0.9V@600A	1.8V@1200A	0.18V@144A	0.9V@720A	1.8V@1440A
Static Mode							
Constant Current Mode	Range	0~120A	0~600A	0~1200A	0~144A	0~720A	0~1440A
	Resolution	1mA	5mA	10mA	1mA	5mA	10mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~1100W	0~5500W	0~11000W	0~1320W	0~6600W	0~13200W
	Resolution	20mW	100mW	200mW	40mW	200mW	400mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	3mΩ~30Ω(16V)	12mΩ~120Ω(80V)	300mΩ~600Ω(200V)	2.5mΩ~25Ω(16V)	10mΩ~100Ω(80V)	250mΩ~500Ω(200V)
	Resolution	3mΩ(16V)	12mΩ(80V)	300mΩ(200V)	2.5mΩ(16V)	10mΩ(80V)	250mΩ(200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	1mA/μs~8A/μs	5mA/μs~24A/μs	10mA/μs~48A/μs	1mA/μs~9.6A/μs	5mA/μs~28.8A/μs	10mA/μs~57.6A/μs
	Slew Rate(Adv.)	1mA/μs~1.2A/μs	5mA/μs~6A/μs	10mA/μs~12A/μs	1mA/μs~1.44A/μs	5mA/μs~7.2A/μs	10mA/μs~14.4A/μs
	Min. Rise Time(Pro.)	10μs(Typical)			10μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	1mA/μs	5mA/μs	10mA/μs	1mA/μs	5mA/μs	10mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~120A	0~600A	0~1200A	0~144A	0~720A	0~1440A
	Resolution	1mA	5mA	10mA	1mA	5mA	10mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~1100W	0~5500W	0~11000W	0~1320W	0~6600W	0~13200W
	Resolution	20mW	100mW	200mW	40mW	200mW	400mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		17.6V	88V	220V	17.6V	88V	220V
OCP		122.4A	612A	1224A	146.88A	734.4A	1468.8A
OPP		1133W	5665W	11330W	1359.6W	6798W	13596W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x311.0x670.0 mm			423.0x311.0x670.0 mm		
Package Dimensions(WxHxD)		541.0x591.0x891.0 mm			541.0x591.0x891.0 mm		
Unit Weight		67kg			72.5kg		
Shipping Weight		87kg			92.5kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		450VA			450VA		
Fuse		5A			5A		

EL Series Programmable DC Electronic Load

MODEL		EL200VDC15400W			EL200VDC17600W		
Rated	Voltage	0~200V			0~200V		
	Current	0~1680A			0~1920A		
	Power	0~15400W			0~17600W		
	Min. Operating Voltage	0.18V@168A	0.9V@840A	1.8V@1680A	0.18V@192A	0.9V@960A	1.8V@1920A
Static Mode							
Constant Current Mode	Range	0~168A	0~840A	0~1680A	0~192A	0~960A	0~1920A
	Resolution	2mA	10mA	20mA	2mA	10mA	20mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~1540W	0~7700W	0~15400W	0~1760W	0~8800W	0~17600W
	Resolution	40mW	200mW	400mW	100mW	500mW	1000mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	2.5mΩ~25Ω(16V)	10mΩ~100Ω(80V)	250mΩ~500Ω(200V)	2mΩ~20Ω(16V)	7.5mΩ~75Ω(80V)	200mΩ~400Ω(200V)
	Resolution	2.5mΩ(16V)	10mΩ(80V)	250mΩ(200V)	2mΩ(16V)	7.5mΩ(80V)	200mΩ(200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	2mA/μs~11.2A/μs	10mA/μs~32A/μs	20mA/μs~64A/μs	2mA/μs~12.8A/μs	10mA/μs~34A/μs	20mA/μs~68A/μs
	Slew Rate(Adv.)	2mA/μs~1.68A/μs	10mA/μs~8.4A/μs	20mA/μs~16.8A/μs	2mA/μs~1.92A/μs	10mA/μs~9.6A/μs	20mA/μs~19.2A/μs
	Min. Rise Time(Pro.)	10μs(Typical)			10μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	2mA/μs	10mA/μs	20mA/μs	2mA/μs	10mA/μs	20mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~168A	0~840A	0~1680A	0~192A	0~960A	0~1920A
	Resolution	2mA	10mA	20mA	2mA	10mA	20mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~1540W	0~7700W	0~15400W	0~1760W	0~8800W	0~17600W
	Resolution	40mW	200mW	400mW	100mW	500mW	1000mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		17.6V	88V	220V	17.6V	88V	220V
OCP		171.36A	856.8A	1713.6A	195.84A	979.2A	1958.4A
OPP		1586.2W	7931W	15862W	1812.8W	9064W	18128W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x444.0x670.0 mm			423.0x444.0x670.0 mm		
Package Dimensions(WxHxD)		544.0x741.0x891.0 mm			544.0x741.0x891.0 mm		
Unit Weight		94.5kg			100kg		
Shipping Weight		116.5kg			122kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		700VA			700VA		
Fuse		8A			8A		

MODEL		EL200VDC19800W			EL200VDC22000W		
Rated	Voltage	0~200V			0~200V		
	Current	0~2160A			0~2400A		
	Power	0~19800W			0~22000W		
	Min. Operating Voltage	0.18V@216A	0.9V@1080A	1.8V@2160A	0.18V@240A	0.9V@1200A	1.8V@2400A
Static Mode							
Constant Current Mode	Range	0~216A	0~1080A	0~2160A	0~240A	0~1200A	0~2400A
	Resolution	2mA	10mA	20mA	4mA	20mA	40mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~1980W	0~9900W	0~19800W	0~2200W	0~11000W	0~22000W
	Resolution	100mW	500mW	1000mW	100mW	500mW	1000mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	1.7mΩ~16.7Ω(16V)	6.7mΩ~66.7Ω(80V)	166.7mΩ~333Ω(200V)	1.5mΩ~15Ω(16V)	6mΩ~60Ω(80V)	150mΩ~300Ω(200V)
	Resolution	1.7mΩ(16V)	6.7mΩ(80V)	166.7mΩ(200V)	1.5mΩ(16V)	6mΩ(80V)	150mΩ(200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	2mA/μs~14.4A/μs	10mA/μs~36A/μs	20mA/μs~72A/μs	4mA/μs~16A/μs	20mA/μs~40A/μs	40mA/μs~80A/μs
	Slew Rate(Adv.)	2mA/μs~2.16A/μs	10mA/μs~10.8A/μs	20mA/μs~21.6A/μs	4mA/μs~2.4A/μs	20mA/μs~12A/μs	40mA/μs~24A/μs
	Min. Rise Time(Pro.)	10μs(Typical)			10μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	2mA/μs	10mA/μs	20mA/μs	4mA/μs	20mA/μs	40mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~216A	0~1080A	0~2160A	0~240A	0~1200A	0~2400A
	Resolution	2mA	10mA	20mA	4mA	20mA	40mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~1980W	0~9900W	0~19800W	0~2200W	0~11000W	0~22000W
	Resolution	100mW	500mW	1000mW	100mW	500mW	1000mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		17.6V	88V	220V	17.6V	88V	220V
OCP		220.32A	1101.6A	2203.2A	244.8A	1224A	2448A
OPP		2039.4W	10197W	20394W	2266W	11330W	22660W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x444.0x670.0 mm			423.0x577.0x670.0 mm		
Package Dimensions(WxHxD)		544.0x741.0x891.0 mm			541.0x861.0x891.0 mm		
Unit Weight		105.5kg			129kg		
Shipping Weight		127.5kg			153kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		700VA			900VA		
Fuse		8A			10A		

MODEL		EL200VDC24200W			EL200VDC26400W		
Rated	Voltage	0~200V			0~200V		
	Current	0~2640A			0~2880A		
	Power	0~24200W			0~26400W		
	Min. Operating Voltage	0.18V@264A	0.9V@1320A	1.8V@2064A	0.18V@288A	0.9V@1440A	1.8V@2880A
Static Mode							
Constant Current Mode	Range	0~264A	0~1320A	0~2640A	0~288A	0~1440A	0~2880A
	Resolution	4mA	20mA	40mA	4mA	20mA	40mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~2420W	0~12100W	0~24200W	0~2640W	0~13200W	0~26400W
	Resolution	100mW	500mW	1000mW	100mW	500mW	1000mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	1.5mΩ~15Ω(16V)	6mΩ~60Ω(80V)	150mΩ~300Ω(200V)	1.3mΩ~12.5Ω(16V)	5mΩ~50Ω(80V)	125mΩ~250Ω(200V)
	Resolution	1.5mΩ(16V)	6mΩ(80V)	150mΩ(200V)	1.3mΩ(16V)	5mΩ(80V)	125mΩ(200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	4mA/μs~17.6A/μs	20mA/μs~44A/μs	40mA/μs~88A/μs	4mA/μs~19.2A/μs	20mA/μs~48A/μs	40mA/μs~96A/μs
	Slew Rate(Adv.)	4mA/μs~2.64A/μs	20mA/μs~13.2A/μs	40mA/μs~26.4A/μs	4mA/μs~2.88A/μs	20mA/μs~14.4A/μs	40mA/μs~28.8A/μs
	Min. Rise Time(Pro.)	10μs(Typical)			10μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	4mA/μs	20mA/μs	40mA/μs	4mA/μs	20mA/μs	40mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~16V	0~80V	0~200V	0~16V	0~80V	0~200V
	Resolution	0.1mV	0.5mV	2mV	0.1mV	0.5mV	2mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~264A	0~1320A	0~2640A	0~288A	0~1440A	0~2880A
	Resolution	4mA	20mA	40mA	4mA	20mA	40mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~2420W	0~12100W	0~24200W	0~2640W	0~13200W	0~26400W
	Resolution	100mW	500mW	1000mW	100mW	500mW	1000mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		17.6V	88V	220V	17.6V	88V	220V
OCP		269.28A	1346.4A	2692.8A	293.76A	1468.8A	2937.6A
OPP		2492.6W	12463W	24926W	2719.2W	13593W	27192W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x577.0x670.0 mm			423.0x577.0x670.0 mm		
Package Dimensions(WxHxD)		541.0x861.0x891.0 mm			541.0x861.0x891.0 mm		
Unit Weight		134.5kg			140kg		
Shipping Weight		158.5kg			164kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		900VA			900VA		
Fuse		10A			10A		

200V Series System Specifications				
Non Linear Mode				
Range	CL	30uF~50000uF		
	RL	As CR Mode		
	Ls	0.1uH~16uH		
	Rs	30mΩ~20Ω		
Resolution	CL	1uF		
	RL	As CR Mode		
	Ls	0.1uH		
	Rs	1mΩ		
Battery Discharge Mode				
Battery Voltage		As CV Mode		
Current Resolution		As CC Mode		
Record		AH/WH		
Test Time		1s~100000s		
Time Resolution		1s		
Program Mode				
Step No.		300 Max.		
Dwell		0.1ms~4000s		
Spec Check		Voltage/Current/Power		
External Waveform Control/Monitor				
Control/Monitor		Voltage/Current		
Input/Ouput Range		0~10V		
Voltage Range		0~L_range F.S.	0~M_range F.S.	0~H_range F.S.
Current Range		0~L_range F.S.	0~M_range F.S.	0~H_range F.S.
Accuracy		0.4%F.S.		
Resolution		4mV		
Bandwidth		20kHz		
Input Impedance		10kΩ		
Short Circuit				
Current(CC)		Full range current value		
Voltage(CV)		Voltage value at the Max power in working mode		
Resistance(CR)		Min resistance value of CR Mode		
Master/Slave				
Parallel Interface		RJ45		
Parallel Quantity (Pro.)		20 units		
Parallel Quantity (Adv.)		20 units		
General				
Graphic Display		4.3” Color touch LCD		
Operation Key Feature		Soft key, Numeric key, Rotary Knob, USB port for transfer and upgrading firmware		
Rack Mount Handles		Yes		
FAN		Temperature Control		
Interface		RS232/RS485/USB(Standard), GPIB/LAN(Optional)		
Communication Response Time		30ms		
Storage Capacity		User defined settings (300 sets), OCP settings (10 sets), OPP settings (10 sets), Default settings (1 set), Factory setting (1 set)		
Environmental				
Operating Temperature		0~40°C		
Storage Temperature		-20~80°C		
Temperature Coefficient		100ppm/°C(Typical)		
Relative Humidity		10~90%RH		
Altitude		⩽2000m		
Regulatory Compliance				
Overvoltage Category		II		
Protection Degree		I		
Pollution Degree		II		
Input Impedance		800kΩ(Typical)		
Isolation Voltage		/		
Certificates		CE		

All specifications are subject to change without notice.

EL Series Programmable DC Electronic Load

MODEL		EL600VDC600W			EL600VDC1200W		
Rated	Voltage	0~600V			0~600V		
	Current	0~40A			0~90A		
	Power	0~600W			0~1200W		
	Min. Operating Voltage	0.8V@4A	0.9V@20A	1.8V@40A	0.8V@9A	4V@45A	8V@90A
Static Mode							
Constant Current Mode	Range	0~4A	0~20A	0~40A	0~9A	0~45A	0~90A
	Resolution	0.1mA	0.5mA	1mA	0.1mA	0.5mA	1mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~60W	0~300W	0~600W	0~120W	0~600W	0~1200W
	Resolution	1mW	5mW	10mW	2mW	10mW	20mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	400mΩ~4000Ω(80V)	1600mΩ~16000Ω(150V)	16000mΩ~32000Ω(600V)	275mΩ~2750Ω(80V)	1100mΩ~11000Ω(150V)	11000mΩ~22000Ω(600V)
	Resolution	400mΩ(80V)	1600mΩ(150V)	16000mΩ(600V)	275mΩ(80V)	1100mΩ(150V)	11000mΩ(600V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.1mA/μs~0.18A/μs	0.5mA/μs~0.9A/μs	1mA/μs~1.8A/μs	0.1mA/μs~0.36A/μs	0.5mA/μs~1.8A/μs	1mA/μs~3.6A/μs
	Slew Rate(Adv.)	0.1mA/μs~0.04A/μs	0.5mA/μs~0.2A/μs	1mA/μs~0.4A/μs	0.1mA/μs~0.09A/μs	0.5mA/μs~0.45A/μs	1mA/μs~0.9A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.1mA/μs	0.5mA/μs	1mA/μs	0.1mA/μs	0.5mA/μs	1mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~4A	0~20A	0~40A	0~9A	0~45A	0~90A
	Resolution	0.1mA	0.5mA	1mA	0.1mA	0.5mA	1mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~60W	0~300W	0~600W	0~120W	0~600W	0~1200W
	Resolution	1mW	5mW	10mW	2mW	10mW	20mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		88V	165V	660V	88V	165V	660V
OCP		4.08A	20.4A	40.8A	9.18A	45.9A	91.8A
OPP		61.8W	309W	618W	123.6W	618W	1236W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x88.0x610.0mm			423.0x88.0x610.0 mm		
Package Dimensions(WxHxD)		665.0x333.0x918.0mm			665.0x333.0x918.0 mm		
Unit Weight		18kg			20kg		
Shipping Weight		27kg			29kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		100VA			105VA		
Fuse		2.5A			2.5A		

MODEL		EL600VDC1800W			EL600VDC2400W		
Rated	Voltage	0~600V			0~600V		
	Current	0~130A			0~180A		
	Power	0~1800W			0~2400W		
	Min. Operating Voltage	0.8V@13A	4V@65A	8V@130A	0.8V@18A	4V@90A	8V@180A
Static Mode							
Constant Current Mode	Range	0~13A	0~65A	0~130A	0~18A	0~90A	0~180A
	Resolution	0.1mA	0.5mA	1mA	0.2mA	1mA	2mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~180W	0~900W	0~1800W	0~240W	0~1200W	0~2400W
	Resolution	2mW	10mW	20mW	5mW	25mW	50mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	200mΩ~2000Ω(80V)	800mΩ~8000Ω(150V)	8000mΩ~16000Ω(600V)	137.5mΩ~1375Ω(80V)	550mΩ~5500Ω(150V)	5500mΩ~11000Ω(600V)
	Resolution	200mΩ(80V)	800mΩ(150V)	8000mΩ(600V)	137.5mΩ(80V)	550mΩ(150V)	5500mΩ(600V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.1mA/μs~0.6A/μs	0.5mA/μs~3A/μs	1mA/μs~6A/μs	0.2mA/μs~0.72A/μs	1mA/μs~3.6A/μs	2mA/μs~7.2A/μs
	Slew Rate(Adv.)	0.1mA/μs~0.13A/μs	0.5mA/μs~0.65A/μs	1mA/μs~1.3A/μs	0.2mA/μs~0.18A/μs	1mA/μs~0.9A/μs	2mA/μs~1.8A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.1mA/μs	0.5mA/μs	1mA/μs	0.2mA/μs	1mA/μs	2mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~13A	0~65A	0~130A	0~18A	0~90A	0~180A
	Resolution	0.1mA	0.5mA	1mA	0.2mA	1mA	2mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~180W	0~900W	0~1800W	0~240W	0~1200W	0~2400W
	Resolution	2mW	10mW	20mW	5mW	25mW	50mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		88V	165V	660V	88V	165V	660V
OCP		13.26A	66.3A	132.6A	18.36A	91.8A	183.6A
OPP		185.4W	927W	1854W	247.2W	1236W	2472W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x88.0x610.0 mm			423.0x88.0x610.0 mm		
Package Dimensions(WxHxD)		665.0x333.0x918.0 mm			665.0x333.0x918.0 mm		
Unit Weight		22kg			24kg		
Shipping Weight		31kg			33kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		125VA			144VA		
Fuse		2.5A			2.5A		

EL Series Programmable DC Electronic Load

MODEL		EL600VDC3000W			EL600VDC3400W		
Rated	Voltage	0~600V			0~600V		
	Current	0~2200A			0~250A		
	Power	0~3000W			0~3400W		
	Min. Operating Voltage	0.8V@22A	4V@110A	8V@220A	0.8V@25A	4V@125A	8V@250A
Static Mode							
Constant Current Mode	Range	0~22A	0~110A	0~220A	0~25A	0~125A	0~250A
	Resolution	0.2mA	1mA	2mA	0.4mA	2mA	4mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~300W	0~1500W	0~3000W	0~340W	0~1700W	0~3400W
	Resolution	5mW	25mW	50mW	10mW	50mW	100mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	110mΩ~1100Ω(80V)	440mΩ~4400Ω(150V)	4400mΩ~8800Ω(600V)	100mΩ~1000Ω(80V)	400mΩ~4000Ω(150V)	4000mΩ~8000Ω(600V)
	Resolution	110mΩ(80V)	440mΩ(150V)	4400mΩ(600V)	100mΩ(80V)	400mΩ(150V)	4000mΩ(600V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.2mA/μs~0.9A/μs	1mA/μs~4.5A/μs	2mA/μs~9A/μs	0.4mA/μs~1A/μs	2mA/μs~5A/μs	4mA/μs~10A/μs
	Slew Rate(Adv.)	0.2mA/μs~0.22A/μs	1mA/μs~1.1A/μs	2mA/μs~2.2A/μs	0.4mA/μs~0.25A/μs	2mA/μs~1.25A/μs	4mA/μs~2.5A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.2mA/μs	1mA/μs	2mA/μs	0.4mA/μs	2mA/μs	4mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~22A	0~110A	0~220A	0~25A	0~125A	0~250A
	Resolution	0.2mA	1mA	2mA	0.4mA	2mA	4mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~300W	0~1500W	0~3000W	0~340W	0~1700W	0~3400W
	Resolution	5mW	25mW	50mW	10mW	50mW	100mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		88V	165V	660V	88V	165V	660V
OCP		22.44A	112.2A	224.4A	25.5A	127.5A	255A
OPP		309W	1545W	3090W	350.2W	1751W	3502W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x88.0x610.0 mm			423.0x133.0x610.0 mm		
Package Dimensions(WxHxD)		665.0x333.0x918.0 mm			665.0x348.0x918.0 mm		
Unit Weight		26kg			27kg		
Shipping Weight		35kg			36kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		152VA			203VA		
Fuse		2.5A			2.5A		

MODEL		EL600VDC4400W			EL600VDC5600W		
Rated	Voltage	0~600V			0~600V		
	Current	0~320A			0~410A		
	Power	0~4400W			0~5600W		
	Min. Operating Voltage	0.8V@32A	4V@160A	8V@320A	0.8V@41A	4V@205A	8V@410A
Static Mode							
Constant Current Mode	Range	0~32A	0~160A	0~320A	0~41A	0~205A	0~410A
	Resolution	0.4mA	2mA	4mA	0.4mA	2mA	4mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~440W	0~2200W	0~4400W	0~560W	0~2800W	0~5600W
	Resolution	10mW	50mW	100mW	10mW	50mW	100mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	75mΩ~750Ω(80V)	300mΩ~3000Ω(150V)	3000mΩ~6000Ω(600V)	60mΩ~600Ω(80V)	250mΩ~2500Ω(150V)	2500mΩ~5000Ω(600V)
	Resolution	75mΩ(80V)	300mΩ(150V)	3000mΩ(600V)	60mΩ(80V)	250mΩ(150V)	2500mΩ(600V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.4mA/μs~1.28A/μs	2mA/μs~6.4A/μs	4mA/μs~12.8A/μs	0.4mA/μs~1.64A/μs	2mA/μs~8.2A/μs	4mA/μs~16.4A/μs
	Slew Rate(Adv.)	0.4mA/μs~0.32A/μs	2mA/μs~1.6A/μs	4mA/μs~3.2A/μs	0.4mA/μs~0.41A/μs	2mA/μs~2.05A/μs	4mA/μs~4.1A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.4mA/μs	2mA/μs	4mA/μs	0.4mA/μs	2mA/μs	4mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~32A	0~160A	0~320A	0~41A	0~205A	0~410A
	Resolution	0.4mA	2mA	4mA	0.4mA	2mA	4mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~440W	0~2200W	0~4400W	0~560W	0~2800W	0~5600W
	Resolution	10mW	50mW	100mW	10mW	50mW	100mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		88V	165V	660V	88V	165V	660V
OCP		32.6A	163.2A	326.4A	41.82A	209.1A	418.2A
OPP		453.2W	2266W	4532W	576.8W	2884W	5768W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x133.0x610.0 mm			423.0x133.0x610.0 mm		
Package Dimensions(WxHxD)		665.0x348.0x918.0 mm			665.0x348.0x918.0 mm		
Unit Weight		28.5kg			32.5kg		
Shipping Weight		37.5kg			41.5kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		223VA			252VA		
Fuse		2.5A			2.5A		

EL Series Programmable DC Electronic Load

MODEL		EL600VDC6600W			EL600VDC8800W		
Rated	Voltage	0~600V			0~600V		
	Current	0~480A			0~640A		
	Power	0~6600W			0~8800W		
	Min. Operating Voltage	0.8V@48A	4V@240A	8V@480A	0.8V@64A	4V@320A	8V@640A
Static Mode							
Constant Current Mode	Range	0~48A	0~240A	0~480A	0~64A	0~320A	0~640A
	Resolution	0.5mA	2mA	5mA	0.5mA	2mA	5mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~660W	0~3300W	0~6600W	0~880W	0~4400W	0~8800W
	Resolution	10mW	50mW	100mW	20mW	100mW	200mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	50mΩ~500Ω(80V)	200mΩ~2000Ω(150V)	2000mΩ~4000Ω(600V)	37.5mΩ~375Ω(80V)	150mΩ~1500Ω(150V)	1500mΩ~3000Ω(600V)
	Resolution	50mΩ(80V)	200mΩ(150V)	2000mΩ(600V)	37.5mΩ(80V)	150mΩ(150V)	1500mΩ(600V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.5mA/μs~1.92A/μs	2mA/μs~9.6A/μs	5mA/μs~19.2A/μs	0.5mA/μs~2A/μs	2mA/μs~10A/μs	5mA/μs~20A/μs
	Slew Rate(Adv.)	0.5mA/μs~0.48A/μs	2mA/μs~2.4A/μs	5mA/μs~4.8A/μs	0.5mA/μs~0.64A/μs	2mA/μs~3.2A/μs	5mA/μs~6.4A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.5mA/μs	2mA/μs	5mA/μs	0.5mA/μs	2mA/μs	5mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~48A	0~240A	0~480A	0~64A	0~320A	0~640A
	Resolution	0.5mA	2mA	5mA	0.5mA	2mA	5mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~660W	0~3300W	0~6600W	0~880W	0~4400W	0~8800W
	Resolution	10mW	50mW	100mW	20mW	100mW	200mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		88V	165V	660V	88V	165V	660V
OCP		48.96A	244.8A	489.6A	65.28A	326.4A	652.8A
OPP		679.8W	3399W	6798W	906.4W	4532W	9064W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x177.0x610.0 mm			423.0x311.0x670.0 mm		
Package Dimensions(WxHxD)		665.0x392.0x918.0 mm			541.0x591.0x891.0 mm		
Unit Weight		38kg			61.5kg		
Shipping Weight		47kg			81.5kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		285VA			450VA		
Fuse		3.15A			5A		

MODEL		EL600VDC11000W			EL600VDC13200W		
Rated	Voltage	0~600V			0~600V		
	Current	0~800A			0~960A		
	Power	0~11000W			0~13200W		
	Min. Operating Voltage	0.8V@80A	4V@400A	8V@800A	0.8V@96A	4V@480A	8V@960A
Static Mode							
Constant Current Mode	Range	0~80A	0~400A	0~800A	0~96A	0~480A	0~960A
	Resolution	1mA	5mA	10mA	1mA	5mA	10mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~1100W	0~5500W	0~11000W	0~1320W	0~6600W	0~13200W
	Resolution	20mW	100mW	200mW	40mW	200mW	400mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	30mΩ~300Ω(80V)	120mΩ~1200Ω(150V)	1200mΩ~2400Ω(600V)	25mΩ~250Ω(80V)	100mΩ~1000Ω(150V)	1000mΩ~2000Ω(600V)
	Resolution	30mΩ(80V)	120mΩ(150V)	1200mΩ(600V)	25mΩ(80V)	100mΩ(150V)	1000mΩ(600V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	1mA/μs~2.5A/μs	5mA/μs~12.5A/μs	10mA/μs~25A/μs	1mA/μs~3A/μs	5mA/μs~15A/μs	10mA/μs~30A/μs
	Slew Rate(Adv.)	1mA/μs~0.8A/μs	5mA/μs~4A/μs	10mA/μs~8A/μs	1mA/μs~0.96A/μs	5mA/μs~4.8A/μs	10mA/μs~9.6A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	1mA/μs	5mA/μs	10mA/μs	1mA/μs	5mA/μs	10mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~80A	0~400A	0~800A	0~96A	0~480A	0~960A
	Resolution	1mA	5mA	10mA	1mA	5mA	10mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~1100W	0~5500W	0~11000W	0~1320W	0~6600W	0~13200W
	Resolution	20mW	100mW	200mW	40mW	200mW	400mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		88V	165V	660V	88V	165V	660V
OCP		81.6A	408A	816A	97.92A	489.6A	979.2A
OPP		1133W	5665W	11330W	1359.6W	6798W	13596W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x311.0x670.0 mm			423.0x311.0x670.0 mm		
Package Dimensions(WxHxD)		541.0x591.0x891.0 mm			541.0x591.0x891.0 mm		
Unit Weight		67kg			72.5kg		
Shipping Weight		87kg			92.5kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		450VA			450VA		
Fuse		5A			5A		

MODEL		EL600VDC15400W			EL600VDC17600W		
Rated	Voltage	0~600V			0~600V		
	Current	0~1120A			0~1280A		
	Power	0~15400W			0~17600W		
	Min. Operating Voltage	0.8V@112A	4V@560A	8V@1120A	0.8V@128A	4V@640A	8V@1280A
Static Mode							
Constant Current Mode	Range	0~112A	0~560A	0~1120A	0~128A	0~640A	0~1280A
	Resolution	1mA	5mA	10mA	1mA	5mA	10mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~1540W	0~7700W	0~15400W	0~1760W	0~8800W	0~17600W
	Resolution	40mW	200mW	400mW	100mW	500mW	1000mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	21mΩ~210Ω(80V)	85mΩ~850Ω(150V)	850mΩ~1700Ω(600V)	18.7mΩ~187Ω(80V)	75mΩ~750Ω(150V)	750mΩ~1500Ω(600V)
	Resolution	21mΩ(80V)	85mΩ(150V)	850mΩ(600V)	18.7mΩ(80V)	75mΩ(150V)	750mΩ(600V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	1mA/μs~3.2A/μs	5mA/μs~16A/μs	10mA/μs~32A/μs	1mA/μs~3.4A/μs	5mA/μs~17A/μs	10mA/μs~34A/μs
	Slew Rate(Adv.)	1mA/μs~1.12A/μs	5mA/μs~5.6A/μs	10mA/μs~11.2A/μs	1mA/μs~1.28A/μs	5mA/μs~6.4A/μs	10mA/μs~12.8A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	1mA/μs	5mA/μs	10mA/μs	1mA/μs	5mA/μs	10mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~112A	0~560A	0~1120A	0~128A	0~640A	0~1280A
	Resolution	1mA	5mA	10mA	1mA	5mA	10mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~1540W	0~7700W	0~15400W	0~1760W	0~8800W	0~17600W
	Resolution	40mW	200mW	400mW	100mW	500mW	1000mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		88V	165V	660V	88V	165V	660V
OCP		114.24A	571.2A	1142.4A	130.56A	652.8A	1305.6A
OPP		1586.2W	7931W	15862W	1812.8W	9064W	18128W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x444.0x670.0 mm			423.0x444.0x670.0 mm		
Package Dimensions(WxHxD)		544.0x741.0x891.0 mm			544.0x741.0x891.0 mm		
Unit Weight		94.5kg			100kg		
Shipping Weight		116.5kg			122kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		700VA			700VA		
Fuse		8A			8A		

MODEL		EL600VDC19800W			EL600VDC22000W		
Rated	Voltage	0~600V			0~600V		
	Current	0~1440A			0~1600A		
	Power	0~19800W			0~22000W		
	Min. Operating Voltage	0.8V@144A	4V@720A	8V@1440A	0.8V@160A	4V@800A	8V@1600A
Static Mode							
Constant Current Mode	Range	0~144A	0~720A	0~1440A	0~160A	0~800A	0~1600A
	Resolution	2mA	10mA	20mA	2mA	10mA	20mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~1980W	0~9900W	0~19800W	0~2200W	0~11000W	0~22000W
	Resolution	100mW	500mW	1000mW	100mW	500mW	1000mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	16.7mΩ~166.7Ω(80V)	66.7mΩ~666.7Ω(150V)	666.7mΩ~1333Ω(600V)	15mΩ~150Ω(80V)	60mΩ~600Ω(150V)	600mΩ~1200Ω(600V)
	Resolution	16.7mΩ(80V)	66.7mΩ(150V)	666.7mΩ(600V)	15mΩ(80V)	60mΩ(150V)	600mΩ(600V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	2mA/μs~3.6A/μs	10mA/μs~18A/μs	20mA/μs~36A/μs	2mA/μs~3.8A/μs	10mA/μs~19A/μs	20mA/μs~38A/μs
	Slew Rate(Adv.)	2mA/μs~1.44A/μs	10mA/μs~7.2A/μs	20mA/μs~14.4A/μs	2mA/μs~1.6A/μs	10mA/μs~8A/μs	20mA/μs~16A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	2mA/μs	10mA/μs	20mA/μs	2mA/μs	10mA/μs	20mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~144A	0~720A	0~1440A	0~160A	0~800A	0~1600A
	Resolution	2mA	10mA	20mA	2mA	10mA	20mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~1980W	0~9900W	0~19800W	0~2200W	0~11000W	0~22000W
	Resolution	100mW	500mW	1000mW	100mW	500mW	1000mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		88V	165V	660V	88V	165V	660V
OCP		146.88A	734.4A	1468.8A	163.2A	816A	1632A
OPP		2039.4W	10197W	20394W	2266W	11330W	22660W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x444.0x670.0 mm			423.0x577.0x670.0 mm		
Package Dimensions(WxHxD)		544.0x741.0x891.0 mm			541.0x861.0x891.0 mm		
Unit Weight		105.5kg			129kg		
Shipping Weight		127.5kg			153kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		700VA			900VA		
Fuse		8A			10A		

EL Series Programmable DC Electronic Load

MODEL		EL600VDC24200W			EL600VDC26400W		
Rated	Voltage	0~600V			0~600V		
	Current	0~1760A			0~1920A		
	Power	0~24200W			0~26400W		
	Min. Operating Voltage	0.8V@176A	4V@880A	8V@1760A	0.8V@192A	4V@960A	8V@1920A
Static Mode							
Constant Current Mode	Range	0~176A	0~880A	0~1760A	0~192A	0~960A	0~1920A
	Resolution	2mA	10mA	20mA	2mA	10mA	20mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~2420W	0~12100W	0~24200W	0~2640W	0~13200W	0~26400W
	Resolution	100mW	500mW	1000mW	100mW	500mW	1000mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	13.6mΩ~136Ω(80V)	55mΩ~550Ω(150V)	550mΩ~1100Ω(600V)	12.5mΩ~125Ω(80V)	50mΩ~500Ω(150V)	500mΩ~1000Ω(600V)
	Resolution	13.6mΩ(80V)	55mΩ(150V)	550mΩ(600V)	12.5mΩ(80V)	50mΩ(150V)	500mΩ(600V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	2mA/μs~4A/μs	10mA/μs~20A/μs	20mA/μs~40A/μs	2mA/μs~4.2A/μs	10mA/μs~21A/μs	20mA/μs~42A/μs
	Slew Rate(Adv.)	2mA/μs~1.76A/μs	10mA/μs~8.8A/μs	20mA/μs~17.6A/μs	2mA/μs~1.92A/μs	10mA/μs~9.6A/μs	20mA/μs~19.2A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	2mA/μs	10mA/μs	20mA/μs	2mA/μs	10mA/μs	20mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~80V	0~150V	0~600V	0~80V	0~150V	0~600V
	Resolution	0.5mV	1mV	5mV	0.5mV	1mV	5mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~176A	0~880A	0~1760A	0~192A	0~960A	0~1920A
	Resolution	2mA	10mA	20mA	2mA	10mA	20mA
	Accuracy	0.04%+0.04%F.S.			0.04%+0.04%F.S.		
Power	Range	0~2420W	0~12100W	0~24200W	0~2640W	0~13200W	0~26400W
	Resolution	100mW	500mW	1000mW	100mW	500mW	1000mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		88V	165V	660V	88V	165V	660V
OCP		179.52A	897.6A	1795.2A	195.84A	979.2A	1958.4A
OPP		2492.6W	12463W	24926W	2719.2W	13596W	27192W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x577.0x670.0 mm			423.0x577.0x670.0 mm		
Package Dimensions(WxHxD)		541.0x861.0x891.0 mm			541.0x861.0x891.0 mm		
Unit Weight		134.5kg			140kg		
Shipping Weight		158.5kg			164kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		900VA			900VA		
Fuse		10A			10A		

600V Series System Specifications				
Non Linear Mode				
Range	CL	30uF~50000uF		
	RL	As CR Mode		
	Ls	0.1uH~16uH		
	Rs	30mΩ~20Ω		
Resolution	CL	1uF		
	RL	As CR Mode		
	Ls	0.1uH		
	Rs	1mΩ		
Battery Discharge Mode				
Battery Voltage		As CV Mode		
Current Resolution		As CC Mode		
Record		AH/WH		
Test Time		1s~100000s		
Time Resolution		1s		
Program Mode				
Step No.		300 Max.		
Dwell		0.1ms~4000s		
Spec Check		Voltage/Current/Power		
External Waveform Control/Monitor				
Control/Monitor		Voltage/Current		
Input/Ouput Range		0~10V		
Voltage Range		0~L_range F.S.	0~M_range F.S.	0~H_range F.S.
Current Range		0~L_range F.S.	0~M_range F.S.	0~H_range F.S.
Accuracy		0.4%F.S.		
Resolution		4mV		
Bandwidth		20kHz		
Input Impedance		10kΩ		
Short Circuit				
Current(CC)		Full range current value		
Voltage(CV)		Voltage value at the Max power in working mode		
Resistance(CR)		Min resistance value of CR Mode		
Master/Slave				
Parallel Interface		RJ45		
Parallel Quantity (Pro.)		20 units		
Parallel Quantity (Adv.)		20 units		
General				
Graphic Display		4.3” Color touch LCD		
Operation Key Feature		Soft key, Numeric key, Rotary Knob, USB port for transfer and upgrading firmware		
Rack Mount Handles		Yes		
FAN		Temperature Control		
Interface		RS232/RS485/USB(Standard), GPIB/LAN(Optional)		
Communication Response Time		30ms		
Storage Capacity		User defined settings (300 sets), OCP settings (10 sets), OPP settings (10 sets), Default settings (1 set), Factory setting (1 set)		
Environmental				
Operating Temperature		0~40°C		
Storage Temperature		-20~80°C		
Temperature Coefficient		100ppm/°C(Typical)		
Relative Humidity		10~90%RH		
Altitude		⩽2000m		
Regulatory Compliance				
Overvoltage Category		II		
Protection Degree		I		
Pollution Degree		II		
Input Impedance		1MΩ(Typical)		
Isolation Voltage		/		
Certificates		CE		

All specifications are subject to change without notice.

EL Series Programmable DC Electronic Load

MODEL		EL1200VDC1200W			EL1200VDC2400W		
Rated	Voltage	0~1200V			0~1200V		
	Current	0~45A			0~90A		
	Power	0~1200W			0~2400W		
	Min. Operating Voltage	2V@4.5A	10V@22.5A	20V@45A	2V@9A	10V@45A	20V@90A
Static Mode							
Constant Current Mode	Range	0~4.5A	0~22.5A	0~45A	0~9A	0~45A	0~90A
	Resolution	0.1mA	0.5mA	1mA	0.1mA	0.5mA	1mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~150V	0~600V	0~1200V	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV	1mV	5mV	10mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~120W	0~600W	0~1200W	0~240W	0~1200W	0~2400W
	Resolution	2mW	10mW	20mW	5mW	25mW	50mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	275mΩ~2750Ω(150V)	1100mΩ~11000Ω(600V)	11000mΩ~22000Ω(1200V)	137.5mΩ~1375Ω(150V)	550mΩ~5500Ω(600V)	5500mΩ~11000Ω(1200V)
	Resolution	275mΩ(150V)	1100mΩ(600V)	11000mΩ(12000V)	150mΩ(150V)	600mΩ(600V)	6000mΩ(1200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.1mA/μs~0.225A/μs	0.5mA/μs~1.125A/μs	1mA/μs~2.25A/μs	0.1mA/μs~0.45A/μs	0.5mA/μs~2.25A/μs	1mA/μs~4.5A/μs
	Slew Rate(Adv.)	0.1mA/μs~0.045A/μs	0.5mA/μs~0.225A/μs	1mA/μs~0.45A/μs	0.1mA/μs~0.09A/μs	0.5mA/μs~0.45A/μs	1mA/μs~0.9A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.1mA/μs	0.5mA/μs	1mA/μs	0.1mA/μs	0.5mA/μs	1mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~150V	0~600V	0~1200V	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV	1mV	5mV	10mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~4.5A	0~22.5A	0~45A	0~9A	0~45A	0~90A
	Resolution	0.1mA	0.5mA	1mA	0.1mA	0.5mA	1mA
	Accuracy	0.04%+0.06%F.S.			0.04%+0.06%F.S.		
Power	Range	0~120W	0~600W	0~1200W	0~240W	0~1200W	0~2400W
	Resolution	2mW	10mW	20mW	5mW	25mW	50mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		165V	660V	1320V	165V	660V	1320V
OCP		4.59A	22.95A	45.9A	9.18A	45.9A	91.8A
OPP		123.6W	618W	1236W	247.2W	1236W	2472W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x88.0x610.0 mm			423.0x88.0x610.0 mm		
Package Dimensions(WxHxD)		665.0x333.0x918.0 mm			665.0x333.0x918.0 mm		
Unit Weight		20kg			24kg		
Shipping Weight		29kg			33kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		105VA			144VA		
Fuse		2.5A			2.5A		

MODEL		EL1200VDC3400W			EL1200VDC4400W		
Rated	Voltage	0~1200V			0~1200V		
	Current	0~125A			0~160A		
	Power	0~3400W			0~4400W		
	Min. Operating Voltage	2V@12.5A	10V@62.5A	20V@125A	2V@16A	10V@80A	20V@160A
Static Mode							
Constant Current Mode	Range	0~12.5A	0~62.5A	0~125A	0~16A	0~80A	0~160A
	Resolution	0.2mA	1mA	2mA	0.2mA	1mA	2mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~150V	0~600V	0~1200V	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV	1mV	5mV	10mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~340W	0~1700W	0~3400W	0~440W	0~2200W	0~4400W
	Resolution	10mW	50mW	100mW	10mW	50mW	100mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	100mΩ~1000Ω(150V)	400mΩ~4000Ω(600V)	4000mΩ~8000Ω(1200V)	75mΩ~750Ω(150V)	300mΩ~3000Ω(600V)	3000mΩ~6000Ω(1200V)
	Resolution	100mΩ(150V)	400mΩ(600V)	4000mΩ(1200V)	75mΩ(150V)	300mΩ(600V)	3000mΩ(1200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.2mA/μs~0.625A/μs	1mA/μs~3.125A/μs	2mA/μs~6.25A/μs	0.2mA/μs~0.8A/μs	1mA/μs~4A/μs	2mA/μs~8A/μs
	Slew Rate(Adv.)	0.2mA/μs~0.125A/μs	1mA/μs~0.625A/μs	2mA/μs~1.25A/μs	0.2mA/μs~0.16A/μs	1mA/μs~0.8A/μs	2mA/μs~1.6A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.2mA/μs	1mA/μs	2mA/μs	0.2mA/μs	1mA/μs	2mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~150V	0~600V	0~1200V	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV	1mV	5mV	10mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~12.5A	0~62.5A	0~125A	0~16A	0~80A	0~160A
	Resolution	0.2mA	1mA	2mA	0.2mA	1mA	2mA
	Accuracy	0.04%+0.06%F.S.			0.04%+0.06%F.S.		
Power	Range	0~340W	0~1700W	0~3400W	0~440W	0~2200W	0~4400W
	Resolution	10mW	50mW	100mW	10mW	50mW	100mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		165V	660V	1320V	165V	660V	1320V
OCP		12.75A	63.75A	127.5A	16.32A	81.6A	163.2A
OPP		350.2W	1751W	3502W	453.2W	2266W	4532W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x133.0x610.0 mm			423.0x133.0x610.0 mm		
Package Dimensions(WxHxD)		665.0x348.0x918.0 mm			665.0x348.0x918.0 mm		
Unit Weight		27kg			28.5kg		
Shipping Weight		36kg			37.5kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		203VA			223VA		
Fuse		2.5A			2.5A		

EL Series Programmable DC Electronic Load

MODEL		EL1200VDC5600W			EL1200VDC6600W		
Rated	Voltage	0~1200V			0~1200V		
	Current	0~205A			0~240A		
	Power	0~5600W			0~6600W		
	Min. Operating Voltage	2V@20.5A	10V@102.5A	20V@205A	2V@24A	10V@120A	20V@240A
Static Mode							
Constant Current Mode	Range	0~20.5A	0~102.5A	0~205A	0~24A	0~120A	0~240A
	Resolution	0.2mA	1mA	2mA	0.2mA	1mA	2mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~150V	0~600V	0~1200V	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV	1mV	5mV	10mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~560W	0~2800W	0~5600W	0~660W	0~3300W	0~6600W
	Resolution	10mW	50mW	100mW	10mW	50mW	100mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	60mΩ~600Ω(150V)	235mΩ~2300Ω(600V)	2350mΩ~4700Ω(1200V)	50mΩ~500Ω(150V)	200mΩ~2000Ω(600V)	2000mΩ~4000Ω(1200V)
	Resolution	60mΩ(150V)	235mΩ(600V)	2350mΩ(1200V)	50mΩ(150V)	200mΩ(600V)	2000mΩ(1200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.2mA/μs~1.025A/μs	1mA/μs~5.125A/μs	2mA/μs~10.25A/μs	0.2mA/μs~1.2A/μs	1mA/μs~6A/μs	2mA/μs~12A/μs
	Slew Rate(Adv.)	0.2mA/μs~0.205A/μs	1mA/μs~1.025A/μs	2mA/μs~2.05A/μs	0.2mA/μs~0.24A/μs	1mA/μs~1.2A/μs	2mA/μs~2.4A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.2mA/μs	1mA/μs	2mA/μs	0.2mA/μs	1mA/μs	2mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~150V	0~600V	0~1200V	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV	1mV	5mV	10mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~20.5A	0~102.5A	0~205A	0~24A	0~120A	0~240A
	Resolution	0.2mA	1mA	2mA	0.2mA	1mA	2mA
	Accuracy	0.04%+0.06%F.S.			0.04%+0.06%F.S.		
Power	Range	0~560W	0~2800W	0~5600W	0~660W	0~3300W	0~6600W
	Resolution	10mW	50mW	100mW	10mW	50mW	100mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		165V	660V	1320V	165V	660V	1320V
OCP		20.91A	104.55A	209.1A	24.48A	122.4A	244.8A
OPP		576.8W	2884W	5768W	679.8W	3399W	6798W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x133.0x610.0 mm			423.0x177.0x610.0 mm		
Package Dimensions(WxHxD)		665.0x348.0x918.0 mm			665.0x392.0x918.0 mm		
Unit Weight		32.5kg			38kg		
Shipping Weight		41.5kg			47kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		252VA			285VA		
Fuse		2.5A			3.15A		

MODEL		EL1200VDC8800W			EL1200VDC11000W		
Rated	Voltage	0~1200V			0~1200V		
	Current	0~320A			0~400A		
	Power	0~8800W			0~11000W		
	Min. Operating Voltage	2V@32A	10V@160A	20V@320A	2V@40A	10V@200A	20V@400A
Static Mode							
Constant Current Mode	Range	0~32A	0~160A	0~320A	0~40A	0~200A	0~400A
	Resolution	0.4mA	2mA	4mA	0.4mA	2mA	4mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~150V	0~600V	0~1200V	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV	1mV	5mV	10mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~880W	0~4400W	0~8800W	0~1100W	0~5500W	0~11000W
	Resolution	20mW	100mW	200mW	20mW	100mW	200mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	37.5mΩ~375Ω(150V)	150mΩ~1500Ω(600V)	1500mΩ~3000Ω(1200V)	30mΩ~300Ω(150V)	120mΩ~1200Ω(600V)	1200mΩ~2400Ω(1200V)
	Resolution	37.5mΩ(150V)	150mΩ(600V)	1500mΩ(1200V)	30mΩ(150V)	120mΩ(600V)	1200mΩ(1200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.4mA/μs~1.28A/μs	2mA/μs~6.4A/μs	4mA/μs~12.8A/μs	0.4mA/μs~1.44A/μs	2mA/μs~7.2A/μs	4mA/μs~14.4A/μs
	Slew Rate(Adv.)	0.4mA/μs~0.32A/μs	2mA/μs~1.6A/μs	4mA/μs~3.2A/μs	0.4mA/μs~0.4A/μs	2mA/μs~2A/μs	4mA/μs~4A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.4mA/μs	2mA/μs	4mA/μs	0.4mA/μs	2mA/μs	4mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~150V	0~600V	0~1200V	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV	1mV	5mV	10mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~32A	0~160A	0~320A	0~40A	0~200A	0~400A
	Resolution	0.4mA	2mA	4mA	0.4mA	2mA	4mA
	Accuracy	0.04%+0.06%F.S.			0.04%+0.06%F.S.		
Power	Range	0~880W	0~4400W	0~8800W	0~1100W	0~5500W	0~11000W
	Resolution	20mW	100mW	200mW	20mW	100mW	200mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		165V	660V	1320V	165V	660V	1320V
OCP		32.64A	163.2A	326.4A	40.8A	204A	408A
OPP		906.4W	4532W	9064W	1133W	5665W	11330W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x311.0x670.0 mm			423.0x311.0x670.0 mm		
Package Dimensions(WxHxD)		541.0x591.0x891.0 mm			541.0x591.0x891.0 mm		
Unit Weight		61.5kg			67kg		
Shipping Weight		81.5kg			87kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		450VA			450VA		
Fuse		5A			5A		

MODEL		EL1200VDC13200W			EL1200VDC15400W		
Rated	Voltage	0~1200V			0~1200V		
	Current	0~480A			0~560A		
	Power	0~13200W			0~15400W		
	Min. Operating Voltage	2V@48A	10V@240A	20V@480A	2V@56A	10V@280A	20V@560A
Static Mode							
Constant Current Mode	Range	0~48A	0~240A	0~480A	0~56A	0~280A	0~560A
	Resolution	0.4mA	2mA	4mA	0.5mA	2mA	5mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~150V	0~600V	0~1200V	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV	1mV	5mV	10mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~1320W	0~6600W	0~13200W	0~1540W	0~7700W	0~15400W
	Resolution	40mW	200mW	400mW	40mW	200mW	400mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	25mΩ~250Ω(150V)	100mΩ~1000Ω(600V)	1000mΩ~2000Ω(1200V)	21mΩ~210Ω(150V)	85mΩ~850Ω(600V)	850mΩ~1700Ω(1200V)
	Resolution	25mΩ(150V)	100mΩ(600V)	1000mΩ(1200V)	21mΩ(150V)	85mΩ(600V)	850mΩ(1200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.4mA/μs~1.6A/μs	2mA/μs~8A/μs	4mA/μs~16A/μs	0.5mA/μs~1.8A/μs	2mA/μs~9A/μs	5mA/μs~18A/μs
	Slew Rate(Adv.)	0.4mA/μs~0.48A/μs	2mA/μs~2.4A/μs	4mA/μs~4.8A/μs	0.5mA/μs~0.56A/μs	2mA/μs~2.8A/μs	5mA/μs~5.6A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.4mA/μs	2mA/μs	4mA/μs	0.5mA/μs	2mA/μs	5mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~150V	0~600V	0~1200V	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV	1mV	5mV	10mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~48A	0~240A	0~480A	0~56A	0~280A	0~560A
	Resolution	0.4mA	2mA	4mA	0.5mA	2mA	5mA
	Accuracy	0.04%+0.06%F.S.			0.04%+0.06%F.S.		
Power	Range	0~1320W	0~6600W	0~13200W	0~1540W	0~7700W	0~15400W
	Resolution	40mW	200mW	400mW	40mW	200mW	400mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		165V	660V	1320V	165V	660V	1320V
OCP		48.96A	244.8A	489.6A	57.12A	285.6A	571.2A
OPP		1359.6W	6798W	13596W	1586.2W	7931W	15862W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x311.0x670.0 mm			423.0x444.0x670.0 mm		
Package Dimensions(WxHxD)		541.0x591.0x891.0 mm			544.0x741.0x891.0 mm		
Unit Weight		72.5kg			94.5kg		
Shipping Weight		92.5kg			116.5kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		450VA			700VA		
Fuse		5A			8A		

MODEL		EL1200VDC17600W			EL1200VDC19800W		
Rated	Voltage	0~1200V			0~1200V		
	Current	0~640A			0~720A		
	Power	0~17600W			0~19800W		
	Min. Operating Voltage	2V@64A	10V@320A	20V@640A	2V@72A	10V@360A	20V@720A
Static Mode							
Constant Current Mode	Range	0~64A	0~320A	0~640A	0~72A	0~360A	0~720A
	Resolution	0.5mA	2mA	5mA	0.5mA	2mA	5mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~150V	0~600V	0~1200V	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV	1mV	5mV	10mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~1760W	0~8800W	0~17600W	0~1980W	0~9900W	0~19800W
	Resolution	100mW	500mW	1000mW	100mW	500mW	1000mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	18.7mΩ~187Ω(150V)	75mΩ~750Ω(600V)	750mΩ~1500Ω(1200V)	16.7mΩ~166.7Ω(150V)	66.7mΩ~666Ω(600V)	666.7mΩ~1333Ω(1200V)
	Resolution	18.7mΩ(150V)	75mΩ(600V)	750mΩ(1200V)	16.7mΩ(150V)	66.7mΩ(600V)	666.7mΩ(1200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	0.5mA/μs~1.92A/μs	2mA/μs~9.6A/μs	5mA/μs~19.2A/μs	0.5mA/μs~2A/μs	2mA/μs~10A/μs	5mA/μs~20A/μs
	Slew Rate(Adv.)	0.5mA/μs~0.64A/μs	2mA/μs~3.2A/μs	5mA/μs~6.4A/μs	0.5mA/μs~0.72A/μs	2mA/μs~3.6A/μs	5mA/μs~7.2A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	0.5mA/μs	2mA/μs	5mA/μs	0.5mA/μs	2mA/μs	5mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~150V	0~600V	0~1200V	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV	1mV	5mV	10mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~64A	0~320A	0~640A	0~72A	0~360A	0~720A
	Resolution	0.5mA	2mA	5mA	0.5mA	2mA	5mA
	Accuracy	0.04%+0.06%F.S.			0.04%+0.06%F.S.		
Power	Range	0~1760W	0~8800W	0~17600W	0~1980W	0~9900W	0~19800W
	Resolution	100mW	500mW	1000mW	100mW	500mW	1000mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		165V	660V	1320V	165V	660V	1320V
OCP		65.28A	326.4A	652.8A	73.44A	367.2A	734.4A
OPP		1812.8W	9064W	18128W	2039.4W	10197W	20394W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x444.0x670.0 mm			423.0x444.0x670.0 mm		
Package Dimensions(WxHxD)		544.0x741.0x891.0 mm			544.0x741.0x891.0 mm		
Unit Weight		100kg			105.5kg		
Shipping Weight		122kg			127.5kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		700VA			700VA		
Fuse		8A			8A		

MODEL		EL1200VDC22000W			EL1200VDC24200W		
Rated	Voltage	0~1200V			0~1200V		
	Current	0~800A			0~880A		
	Power	0~22000W			0~24200W		
	Min. Operating Voltage	2V@80A	10V@400A	20V@800A	2V@88A	10V@440A	20V@880A
Static Mode							
Constant Current Mode	Range	0~80A	0~400A	0~800A	0~88A	0~440A	0~880A
	Resolution	1mA	5mA	10mA	1mA	5mA	10mA
	Accuracy	0.05%+0.05%F.S.			0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~150V	0~600V	0~1200V	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV	1mV	5mV	10mV
	Accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
Constant Power Mode	Range	0~2200W	0~11000W	0~22000W	0~2420W	0~12100W	0~24200W
	Resolution	100mW	500mW	1000mW	100mW	500mW	1000mW
	Accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
Constant Resistance Mode	Range	15mΩ~150Ω(150V)	60mΩ~600Ω(600V)	600mΩ~1200Ω(1200V)	13.6mΩ~136Ω(150V)	55mΩ~550Ω(600V)	550mΩ~1100Ω(1200V)
	Resolution	15mΩ(150V)	60mΩ(600V)	600mΩ(1200V)	13.6mΩ(150V)	55mΩ(600V)	550mΩ(1200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.			Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode							
CCD/CRD	T1&T2(Pro.)	0.02ms~300s			0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s			0.05ms~300s		
	Resolution	1μs			1μs		
	Accuracy	1μs+100ppm			1μs+100ppm		
	Slew Rate(Pro.)	1mA/μs~2.1A/μs	5mA/μs~10.5A/μs	10mA/μs~21A/μs	1mA/μs~2.2A/μs	5mA/μs~11A/μs	10mA/μs~22A/μs
	Slew Rate(Adv.)	1mA/μs~0.8A/μs	5mA/μs~4A/μs	10mA/μs~8A/μs	1mA/μs~0.88A/μs	5mA/μs~4.4A/μs	10mA/μs~8.8A/μs
	Min. Rise Time(Pro.)	20μs(Typical)			20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)			50μs(Typical)		
	Resolution	1mA/μs	5mA/μs	10mA/μs	1mA/μs	5mA/μs	10mA/μs
	Accuracy	5%±10us			5%±10us		
Measurement							
Voltage	Range	0~150V	0~600V	0~1200V	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV	1mV	5mV	10mV
	Accuracy	0.015%+0.015%F.S.			0.015%+0.015%F.S.		
Current	Range	0~80A	0~400A	0~800A	0~88A	0~440A	0~880A
	Resolution	1mA	5mA	10mA	1mA	5mA	10mA
	Accuracy	0.04%+0.06%F.S.			0.04%+0.06%F.S.		
Power	Range	0~2200W	0~11000W	0~22000W	0~2420W	0~12100W	0~24200W
	Resolution	100mW	500mW	1000mW	100mW	500mW	1000mW
	Accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
Sampling Frequency		500kHz			500kHz		
Protection							
OVP		165V	660V	1320V	165V	660V	1320V
OCP		81.6A	408A	816A	89.76A	448.8A	897.6A
OPP		2266W	11330W	22660W	2492.6W	12463W	24926W
Over Temperature		70-75°C			70-75°C		
Overvoltage Safety Value		110%VF.S.			110%VF.S.		
Reverse Alarm		Yes			Yes		
Alarm Tone		Yes			Yes		
Mechanical							
Dimensions(WxHxD)		423.0x577.0x670.0 mm			423.0x577.0x670.0 mm		
Package Dimensions(WxHxD)		541.0x861.0x891.0 mm			541.0x861.0x891.0 mm		
Unit Weight		129kg			134.5kg		
Shipping Weight		153kg			158.5kg		
AC Input							
Voltage		100~240Vac			100~240Vac		
Frequency		50~60Hz			50~60Hz		
Power		900VA			900VA		
Fuse		10A			10A		

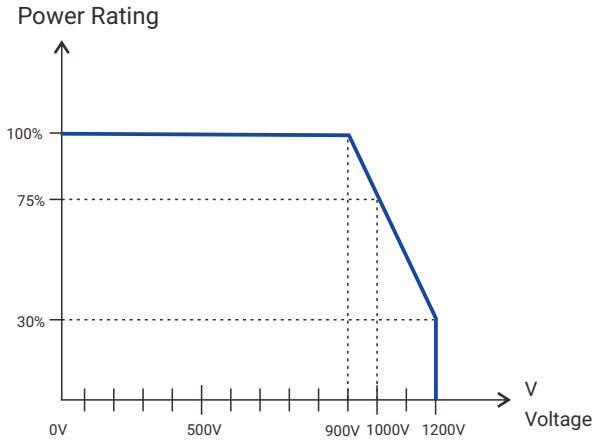
MODEL		EL1200VDC26400W		
Rated	Voltage	0~1200V		
	Current	0~960A		
	Power	0~26400W		
	Min. Operating Voltage	2V@96A	10V@480A	20V@960A
Static Mode				
Constant Current Mode	Range	0~96A	0~480A	0~960A
	Resolution	1mA	5mA	10mA
	Accuracy	0.05%+0.05%F.S.		
Constant Voltage Mode	Range	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV
	Accuracy	0.025%+0.025%F.S.		
Constant Power Mode	Range	0~2640W	0~13200W	0~26400W
	Resolution	100mW	500mW	1000mW
	Accuracy	0.2%+0.2%F.S.		
Constant Resistance Mode	Range	12.5mΩ~125Ω(150V)	50mΩ~500Ω(600V)	500mΩ~1000Ω(1200V)
	Resolution	12.5mΩ(150V)	50mΩ(600V)	500mΩ(1200V)
	Accuracy	Vin/Rset*(0.2%)+0.2% IF.S.		
Dynamic Mode				
CCD/CRD	T1&T2(Pro.)	0.02ms~300s		
	T1&T2(Adv.)	0.05ms~300s		
	Resolution	1μs		
	Accuracy	1μs+100ppm		
	Slew Rate(Pro.)	1mA/μs~2.4A/μs	5mA/μs~12A/μs	10mA/μs~24A/μs
	Slew Rate(Adv.)	1mA/μs~0.96A/μs	5mA/μs~4.8A/μs	10mA/μs~9.6A/μs
	Min. Rise Time(Pro.)	20μs(Typical)		
	Min. Rise Time(Adv.)	50μs(Typical)		
	Resolution	1mA/μs	5mA/μs	10mA/μs
	Accuracy	5%±10us		
Measurement				
Voltage	Range	0~150V	0~600V	0~1200V
	Resolution	1mV	5mV	10mV
	Accuracy	0.015%+0.015%F.S.		
Current	Range	0~96A	0~480A	0~960A
	Resolution	1mA	5mA	10mA
	Accuracy	0.04%+0.06%F.S.		
Power	Range	0~2640W	0~13200W	0~26400W
	Resolution	100mW	500mW	1000mW
	Accuracy	0.1%+0.1%F.S.		
Sampling Frequency		500kHz		
Protection				
OVP		165V	660V	1320V
OCP		97.92A	489.6A	979.2A
OPP		2719.2W	13596W	27192W
Over Temperature		70-75°C		
Overvoltage Safety Value		110%VF.S.		
Reverse Alarm		Yes		
Alarm Tone		Yes		
Mechanical				
Dimensions(WxHxD)		423.0x577.0x670.0 mm		
Package Dimensions(WxHxD)		541.0x861.0x891.0 mm		
Unit Weight		140kg		
Shipping Weight		164kg		
AC Input				
Voltage		100~240Vac		
Frequency		50~60Hz		
Power		900VA		
Fuse		10A		

1200V Series System Specifications				
Non Linear Mode				
Range	CL	30uF~50000uF		
	RL	As CR Mode		
	Ls	0.1uH~16uH		
	Rs	30mΩ~20Ω		
Resolution	CL	1uF		
	RL	As CR Mode		
	Ls	0.1uH		
	Rs	1mΩ		
Battery Discharge Mode				
Battery Voltage		As CV Mode		
Current Resolution		As CC Mode		
Record		AH/WH		
Test Time		1s~100000s		
Time Resolution		1s		
Program Mode				
Step No.		300 Max.		
Dwell		0.1ms~4000s		
Spec Check		Voltage/Current/Power		
External Waveform Control/Monitor				
Control/Monitor		Voltage/Current		
Input/Ouput Range		0~10V		
Voltage Range		0~L_range F.S.	0~M_range F.S.	0~H_range F.S.
Current Range		0~L_range F.S.	0~M_range F.S.	0~H_range F.S.
Accuracy		0.4%F.S.		
Resolution		4mV		
Bandwidth		20kHz		
Input Impedance		10kΩ		
Short Circuit				
Current(CC)		Full range current value		
Voltage(CV)		Voltage value at the Max power in working mode		
Resistance(CR)		Min resistance value of CR Mode		
Master/Slave				
Parallel Interface		RJ45		
Parallel Quantity (Pro.)		20 units		
Parallel Quantity (Adv.)		20 units		
General				
Graphic Display		4.3” Color touch LCD		
Operation Key Feature		Soft key, Numeric key, Rotary Knob, USB port for transfer and upgrading firmware		
Rack Mount Handles		Yes		
FAN		Temperature Control		
Interface		RS232/RS485/USB(Standard), GPIB/LAN(Optional)		
Communication Response Time		30ms		
Storage Capacity		User defined settings (300 sets), OCP settings (10 sets), OPP settings (10 sets), Default settings (1 set), Factory setting (1 set)		
Environmental				
Operating Temperature		0~40°C		
Storage Temperature		-20~80°C		
Temperature Coefficient		100ppm/°C(Typical)		
Relative Humidity		10~90%RH		
Altitude		⩽2000m		
Regulatory Compliance				
Overvoltage Category		II		
Protection Degree		I		
Pollution Degree		II		
Input Impedance		2MΩ(Typical)		
Isolation Voltage		/		
Certificates		CE		

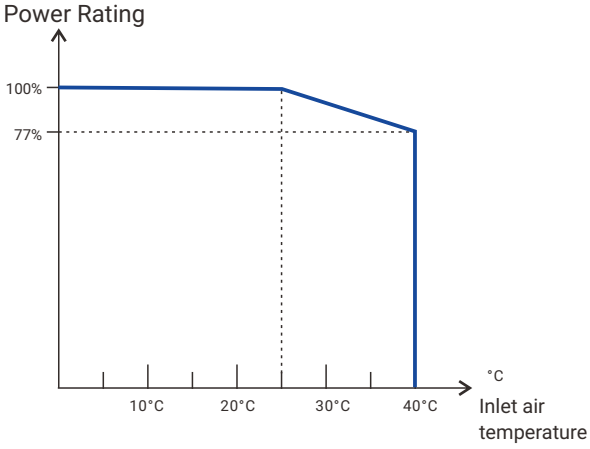
All specifications are subject to change without notice.

PS :

1. Min. operation voltage is applied for current high range.
2. F.S. in power accuracy formula equals to V range F.S. times Irange F.S.
3. Minimum rise time is valid only for loading current > 5%F.S.
4. If the operating voltage exceeds the rated voltage for 1.1 times, it will cause permanent damage to the unit.
5. The over temperature protection sampling point is located in the vent.
6. The measured noise is 79dB which is tested under the condition of 40°C ambient temperature with full power for 5 minutes and 1 meter away from the rear panel.
7. The power rating specifications of 1200V models as below.



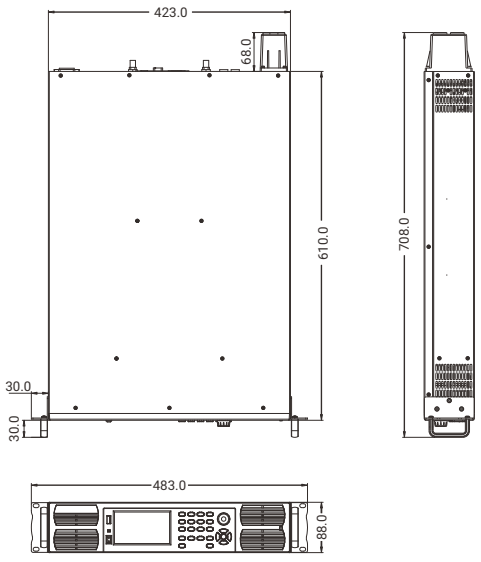
8. All the specifications are tested at temperature of 25°C, unless otherwise noted.
   See the diagram below for power derating.



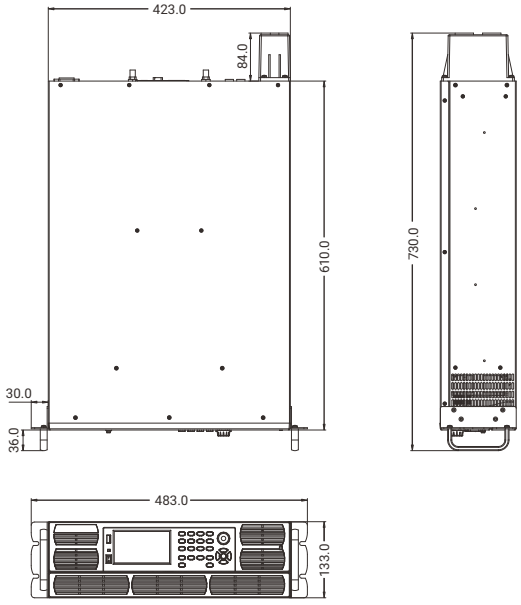
9. Each model size indicated here does not include the wheel and the protective cover.

Dimension Drawing

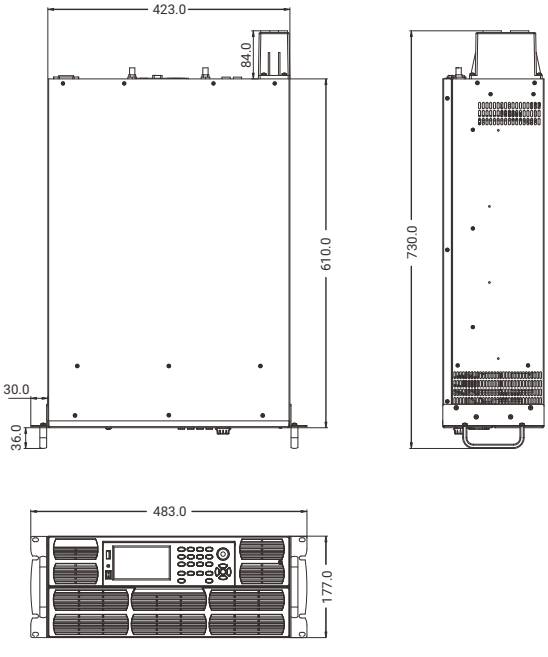
Dimension Drawing(2U) unit:mm



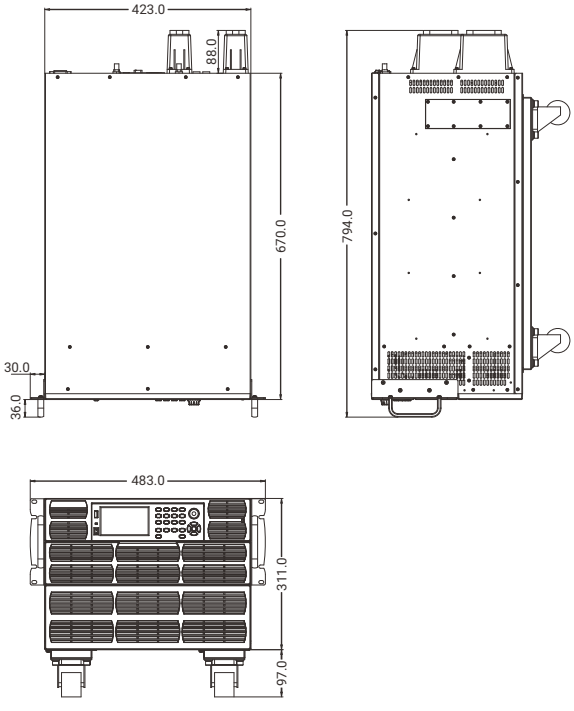
Dimension Drawing(3U) unit:mm



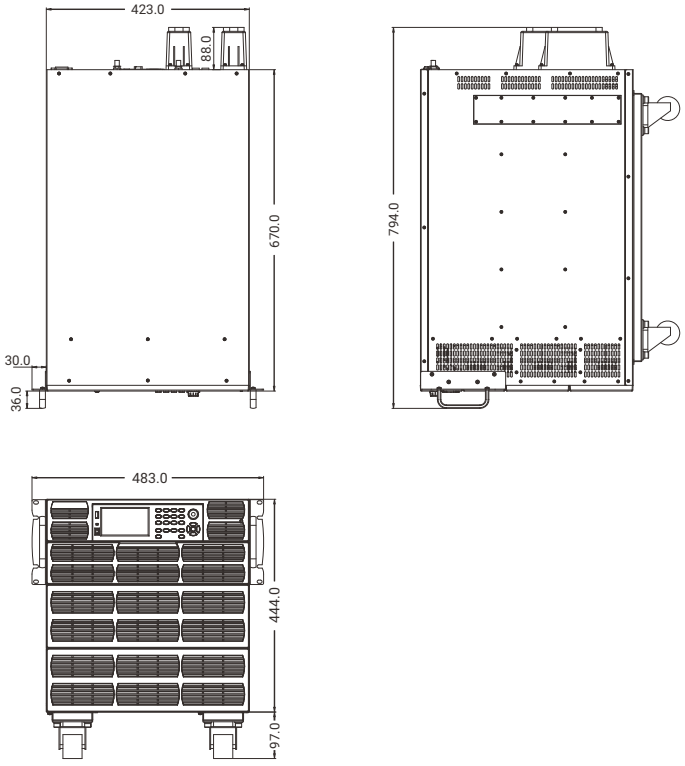
Dimension Drawing(4U) unit:mm



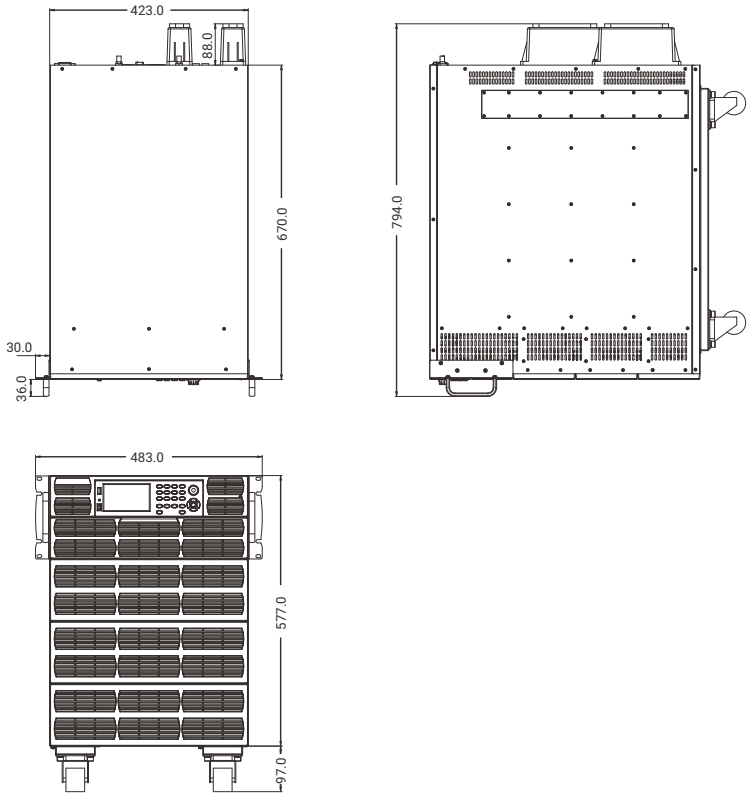
Dimension Drawing(7U) unit:mm



Dimension Drawing(10U) unit:mm



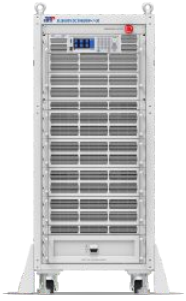
Dimension Drawing(13U) unit:mm



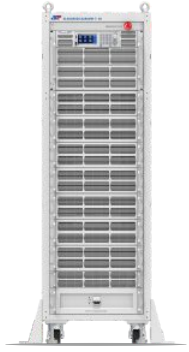
ELS Series DC Electronic Load System

The standardized DC electronic load cabinet is formed with 7U height units. The maximum input current and power of a single cabinet is up to 3000A, 66kW. Support master-slave configuration to increase the input capacity to 264kW.

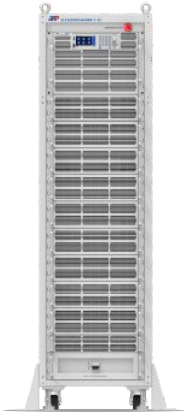
These cabinets use world famous circuit breaker to control the input of DC E-load moudle inside. After power on, the specified unit will be configured as a Master to control all of the slave units. In an emergency off situation the EMS will cut all units in the cabinet from AC supply, ensure safe operation.



30U



36U



42U

Features

- Provides four kinds of basic working mode such as CV/CC/CR/CP, and CV+CC/CV+CR/CR+CC complex operating modes.
- Adjustable current slew rate, adjustable CV loop speed.
- Ultra high precision voltage & current measurement.
- Short circuit test mode.
- Auto mode function provides an easy way to do complicated test.
- V-monitor/I-monitor.
- Full protection: OCP, OPP, OTP, over voltage and reverse alarm.
- Equipped with Emergency Stop, physically off all managed DC eLoads at once.
- Back door with protect switch, safe to the operator.
- Front panel USB interface supports data import and export.
- Using standard SCPI communication protocol.

Quick Selection:

Input Voltage	30U Cabinet	36U Cabinet	42U Cabinet
	39.6kW	52.8kW	66kW
200VDC	3000A	3000A	3000A
600VDC	2880A	3000A	3000A
1200VDC	1440A	1920A	2400A

* This formula is the standard cabinet for EL series 7U model. It could extend to 264W. It is available to select cabinet with different specification according to exact situation. Detail please consults our area manager.

System Configuration

Cabinet Height	30U	36U	42U
Capacity for Loads	21U	28U	35U
Capacity (7U height unit)	3	4	5
PDU Height	3U	3U	3U
EMS Panel Height	1U	1U	1U
Cabinet Frame	2U	2U	2U
Reserved	3U	2U	1U

Optional Information

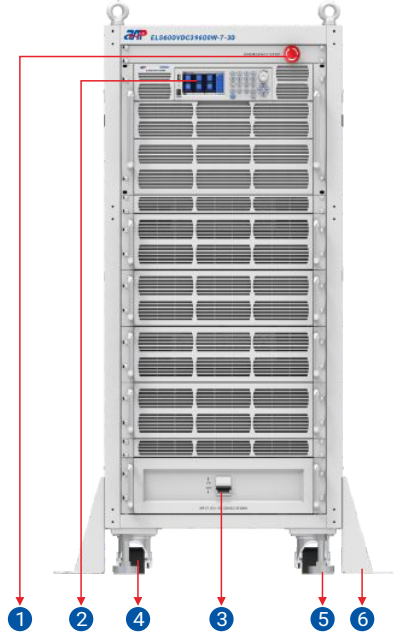
(1) LAN & GPIB interface card & cables



Views

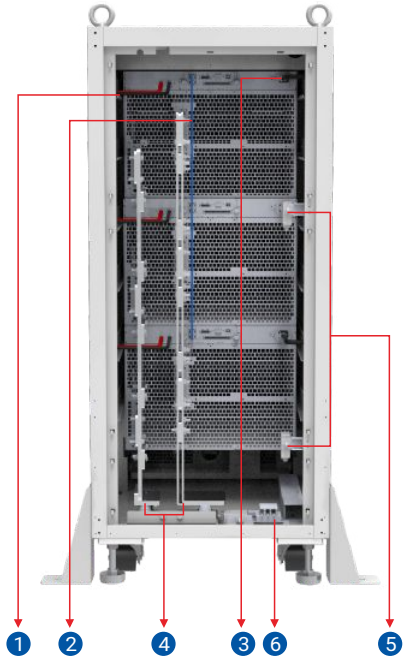
Front side (example model in 30U)

1. Emergency Stop, physically off AC input
2. Master control panel
3. AC input circuit breaker switch
4. Caster(with caster lock)
5. Stopper bolt
6. Support frame



Rear side (example model in 30U, remove the back door)

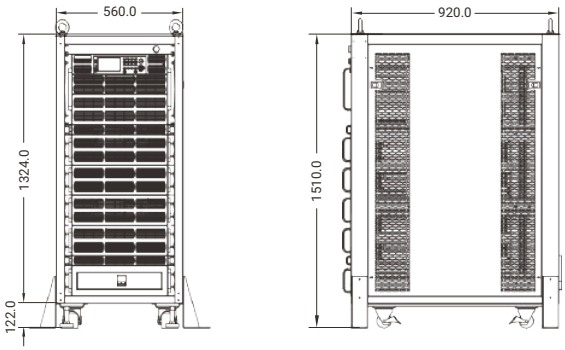
1. Remote sense connections
2. SYSTEM BUS, for master/slave system data transmission
3. AC input connection of the single unit
4. DC input (bus bars)
5. Protect switch
6. AC input



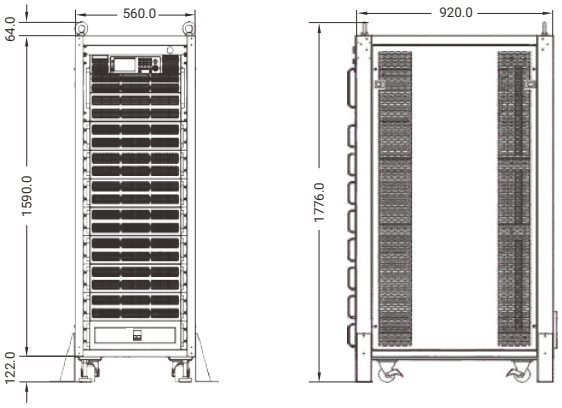
Connecting the cabinet

- This series electronic load is capable of connecting up to 20 units in parallel in Master-slave mode.
- User-created electronic load system can reach at most 528kW (twenty 26.4kW units in parallel).
- The standardized electronic load system can reach up to 264kW (twenty 13.2kW units in parallel).
- Different electronic loads can be connected in parallel in Mater-slave mode. But in no case should the input DC voltage be higher than the rated voltage of electronic loads.
- Use parallel bars to simplify the connection between multiple rack cabinets.
- This series electronic load convert the consumed electrical energy into heat and dissipate it. In order to avoid overheating, decrease the room temperature or derate the actual input power based on the ambient temperature.

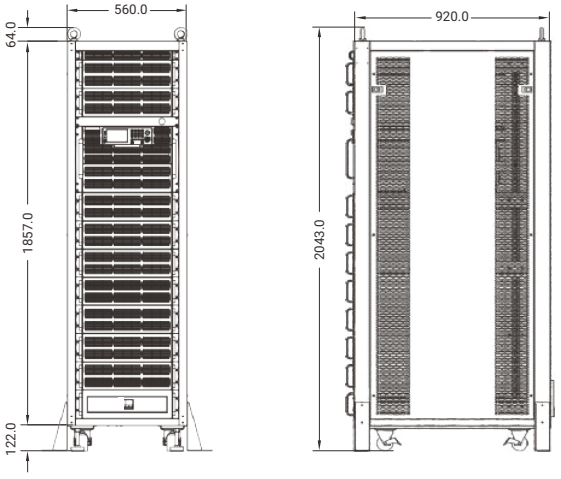
Dimension Drawing(30U) unit:mm



Dimension Drawing(36U) unit:mm



Dimension Drawing(42U) unit:mm



AT-T1000 Series Inverter Test System

AT-T1000 inverter test system is equipped with optimized standard test items. For photovoltaic inverters, it meets the initial electrical test requirements of EN50530, Sandia Lab, IEEE1547, 1547.1, UL1741, China GB/T 19939, CGC/GF004. Only determine the test conditions and specifications can test with standard items.

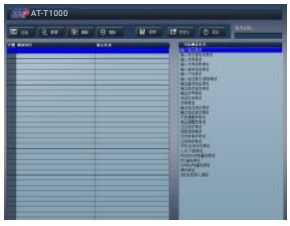
The optimized test project covers five kinds of test requirements. The output performance test verifies the output characteristics of the photovoltaic inverter; the test of the input characteristics checks the electrical parameters of the input; the time and transient test the time and transient parameters in the protection action; the protection test items trigger and test the protection circuit. Special test items provide special test methods according to the communication or characteristics of the object to meet the special usage.

▶ Application

Research and development , factory inspection, type test, production commissioning, laboratory electrical test, identification and testing and other fields of grid-connected inverter.

▶ System Principle Diagram

Software Interface Diagram



Test Project

Test categorization	Test project
Input characteristic test	Input voltage; input current; input power
Output characteristic test	Output voltage; Output current; Output power; Power factor ; Efficiency (CEC/Europe/Conversion/Max); DC component; Harmonic test
Time and transients	Trip time of overvoltage protection/under voltage protection; trip time of over-frequency protection/under-frequency protection; trip time of anti-island; test time overload protection
Protection function test	Overvoltage protection/under voltage protection; over/under frequency protection; anti-island protection; testing of ground insulation impedance; leakage current protection test;
Communication test	RS-232 write/read; LAN test
Special function	LAN write/read; low power start test; Factory default setting;

AT-T2000 Series Switching Power Supply Test System

AT-T2000 automatic switch power supply test system is suitable for AC/DC or DC/DC power supply, adapter, charger, LED power supply, etc. The system adopts hardware modular embedded framework structure, which can provide a variety of hardware options according to the requirements, to facilitate customer cost control. The system is compatible with various brands/models of programmable AC/DC power supply, DC electronic load, power analyzer, digital oscilloscope, timing/noise analyzer, etc. The system has a test item for the optimization standard of power supply characteristics. Combined with open software architecture, users can edit the test program according to their needs. The system supports multiple objects to be tested at one time, which greatly improves the production and test capacity. Meanwhile, it also supports the test of multiple groups of output switching power supply products, meeting the test requirements of any form of switching power supply. With powerful functions and simple operation, the system can automatically generate test reports, edit statistical analysis and conduct system management to meet the requirements of modern quality control and production testing. At the same time, it also supports Shop Floor process control system to realize remote network monitoring, which is the most ideal integrated performance automatic test system for the production line of switching power supply manufacturers.

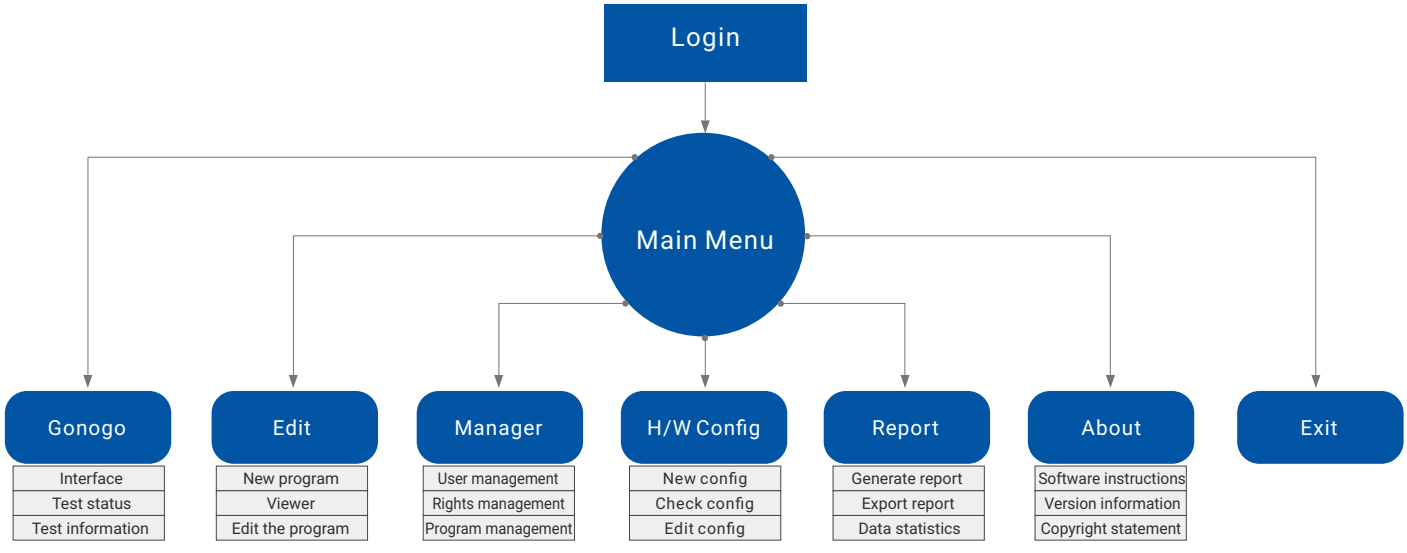
▶ Application

Various switching power supply, adapter, charger, LED power supply, communication power supply, PC power supply, PCBA and finished product testing.

Features

- Standard test item for switching power product characteristic optimization, easy to learn
- Single test, lab verification test or QA test; can support multiple tests in parallel
- Single group output switch power supply product test, meet various power supply test requirements
- The system interface is humanized, easy to operate and learn, which meets the requirements of production line
- Open software editing platform for users to write, modify the test program
- The system architecture is designed to be modular, flexible and easy to maintain and expand

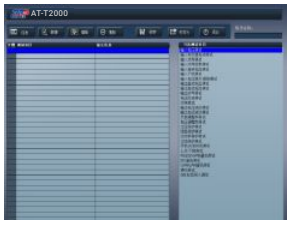
Software Architecture and Specifications



Description of Module Functions (as shown in the figure above)

- Login: Login to the main menu of the software with the correct user name and password
- GO/NOGO(test execution) : the main test interface, test status and results display screen, which can be used for some corresponding operations in the test process, and the test information can be set, such as work order, etc., which will be reflected in the test report
- Edit: add and edit the test program, that is, users select test items according to the required specifications and enter corresponding parameters
- H/W(hardware) : match the test hardware as required, set the information and save it as a file, then select the corresponding hardware configuration for the required test products in combination with the Edit module
- Management: software user management(add, edit or delete); user rights management; test procedures management(release, import or export delete, etc.)
- About: view information about the software, such as version, copyright, etc
- Exit: select to exit from the test software

Software Interface Diagram


Test Project

Test Categorization	Test Project
Input characteristic test	Standby power (energy star); input voltage test; input RMS current test; input power test; input power factor test; input inrush current test; test for AC noise; input voltage rises/falls slowly
Output characteristic test	Output DC voltage test; output DC current test; output DC power test; voltage ripple test; efficiency testing; output voltage fluctuation test; output current fluctuation test; output voltage ripple; load regulation;
Protection function test	Overvoltage protection test; short circuit protection test; overpower protection test; overload protection test;
Sequential testing	Starting time; Rise time; drop time; Shutdown time;
Communication test	Write/read of basic communications, including but not limited to RS232/4S485/USB/LAN/GPIB/CAN
Battery test	Battery charge and discharge time test
Dimming test	Dimming test
Special function	USB D+/D-/DCR test; barcode generation or reading; extended safety electrical comprehensive test

Customer Service Network

APM Technologies' global marketing service network covers not only the major cities of China domestic market, but also the most active economy areas of overseas market, such as in Australia, Europe, America, Asia, Middle East, etc. We offer our valuable customers excellent pre-sales, in-sales and after-sales services.

Service Team

- Set customer service line to provide customers with the 24 hours a day of continuing hotline services.
- Conduct comprehensive system analysis according to customer's requirement and the product's practical application.
- Provide customer with highest cost performance device layout and technical solutions.
- Fast responsive after-sale support and assign after-sale personnel to provide professional service.
- Provide thorough product training service to customer.
- Product provides limited warranty and lifelong track service.
- Provide upgrade and update services to system application software for free.
- Regularly customer satisfactory survey, supervise after-sale service quality.

APM 24 Hours
Continuing Services

Company History

2019~2020

2020
Launch ELS Series DC Electronic Load System.

2019
Launch SP-3U/6U Series DC Power Supply(6kW~36kW); SPS-M/A Series DC Power Supply System(SPSM; SPSA);
Launch EL Series DC Electronic Load(1.2kW~26.4kW).

2017~2018

2018
Launch SP-300 Series AC Power Supply(2U); SPST Series AC Power Supply System;
SPS Series DC Power Supply System; Inverter/Switching Power Supply Test System.

2017
Launch SP-300 Series AC Power Supply(3U, 4U).

2014~2016

2016
Won the "high-tech enterprise" title.

2015
Launch one-stop ICT+FCT online test system and dispensing system to realize unattended operation.
Launch SP-1U/2U Series DC Power Supply(1U).
Launch Marine smart system products.

2014
Launch Energy Saving Burn-in System, with a recovery rate of about 85%.
Launch SP-1U/2U Series DC Power Supply(2U).
Board card type electronic load, board card type power meter are included in development, which helps automation test system.

2012~2013

2013
Programmable power supply complete product development and experiment, enter into the application and reliability testing stage.
Launch extended type high speed dispensing machine for Lens.

2012
APM Technoloies Ltd.

2010~2011

2011
Set up sheet metal workshop, machining workshop, assembly workshop and painting factory.
Project development of programmable power supply, marine smart navigation system.

2010
New products released: High Speed Dispensing Machine, Conformal Coating Machine, ICT and FCT.

1989~1999

1999
Established factory in Dongguan, China.

1989
Factory Found in Taiwan.

NOTE

NOTE

18950-710-10(D)-202101

APM Technologies Ltd

Add: #7, Link Information Industry Park, Shuilianshan Road,
Nancheng, Dongguan, Guangdong, China
Tel: +86 769-2202 8588 ext:2892 Fax: +86 769-2202 6771
E-mail: overseas@apmtech.cn Web: en.apmtech.cn

Scan the QR code for more information