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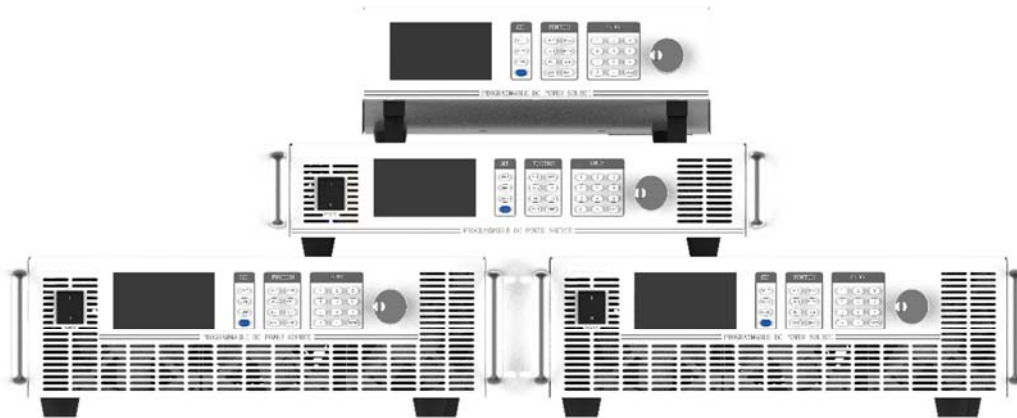
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*Ideal Power Solution*

## CSPW Series Auto Ranging Programmable DC Power Supply



- Rated power range: 1KW / 2KW / 3KW / 6KW / 8KW
- Rated voltage range: 45V ~ 1000V
- Rated current range: 5A ~ 100A
- Standard 19-inch 2U / 3U chassis.
- 4.3-inch-high precision TFT LCD display with a maximum resolution of 1mV and 0.1mA.
- High programming accuracy, high output accuracy, high power density and low ripple noise.
- Support remote voltage compensation.
- RS232 / RS485 / CAN communication interface.



## Overview

CSPW series is the second-generation programmable power supply upgraded on the basis of the CSP series basic programmable power supplies with featured auto-ranging output ability. This series of power supplies add the powerful functions of function generator / dynamic waveform editing, viewing / constant power automatic wide-range output to the CSP series basic programmable power supply, the whole series of CSPW programmable power supplies adopt 4.3-inch LCD display with a display resolution of up to 5 digits, ensures high-precision programming and monitoring levels to make the automatic wide-range programming DC power supplies' measurement results accurate and reliable.

This series of auto-ranging programmable power supplies are designed with output power levels at 1KW / 2KW / 3KW / 6KW / 8KW, and the programmable DC output voltage covers 45Vdc / 60Vdc / 80Vdc / 100Vdc / 150Vdc / 200Vdc / 300Vdc / 400Vdc / 500Vdc / 600Vdc / 1000Vdc. 19-inch 2U/3U standard rack-mounted chassis adopted according to different rated power, which can be used for production line manufacturing test, photovoltaic plate aging test and various programmable DC power supply cutting-edge applications.

The mature IGBT high-frequency switching power topology design, all-digital signal control loop and the microprocessor unit with upgraded version of the built-in control program endow the programmable DC power supplies with high-precision, low ripple, high power density, high efficiency and fast response speed electronic characteristics and can realize richer output programmability at the same time.

At the same time, this series of programmable DC power supplies are equipped with RS485 interface as standard, following the MODBUS-RTU international protocol. CAN interface or

analog/dry contact interface can be selected to realize the remote-control programming of the power supply, and the test results save and uploading to the master unit and status monitoring of the power supply.

## Features

- The power supply chassis is produced using laser technology, with unique color matching and excellent baking paint production technology, which gives the power supply generous and elegant appearance.
- The internal circuit boards of power products all produced by PCBA and DIP process, to reduce human faults. The production adopts process inspection for each step, which reduces the defective assembly rate and further improves product reliability.
- Firm and reliable internal structure design and high-quality packaging reduce the probability of damage that may be caused by transportation.
- High display accuracy: 4.3-inch high-brightness TFT display, preset voltage / current value, output voltage / current value, real-time power, local / remote working mode, start / stop status is all displayed on the same interface with wide viewing angle range and high display resolution up to 1mV/0.1mA
- CV & CC priority switching and adjustable rise / fall time to meet various applications.
- Constant power automatic wide-range output function, under the same rated power condition, the power supply has a wider output voltage and current range
- A variety of new functions, such as function generator function, can provide various dynamic waveforms and up to 50 steps LIST function.
- Support SCOPE display, visually display of voltage, current and power waveform curves.
- 128 sets of datum can be saved and recalled, which is convenient for switching of multiple tests.
- Settable overvoltage / overcurrent / overpower protection functions, and undervoltage / undercurrent or short circuit protection functions
- CAN, RS485 / RS232 interfaces available, optional analog interface / wet and dry node interface.
- Intelligent temperature control fan for effectively reducing noise.

## Applications

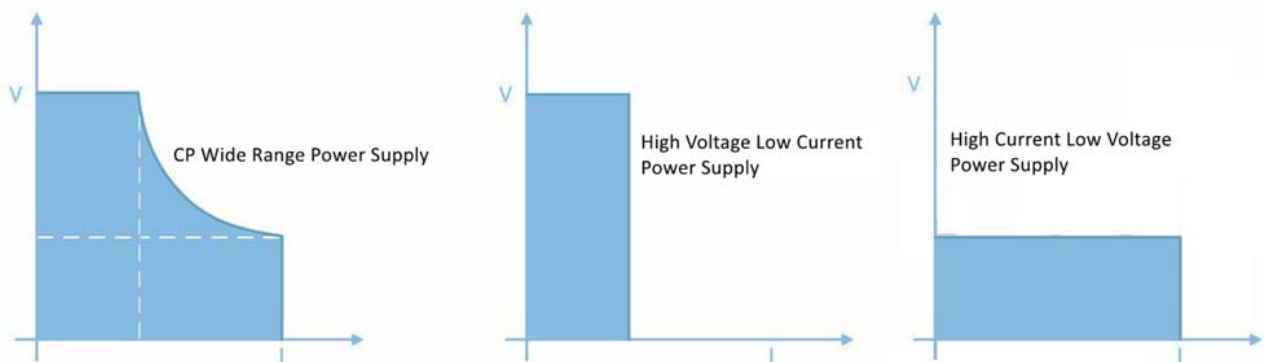
- Aerospace testing.
- Photovoltaic and energy storage systems.
- Electric vehicles.
- Data center.

- Industrial motors.
- Power semiconductor components.
- Automated Test System (ATE).
- Lithium battery, fuel cell.
- Electronic equipment aging test.
- Precision electroplating, sputtering and surface treatment applications.
- Automotive electronics, DC motors, motor controllers, cigarette lighters, audio and video test aging, etc.

## Featured functions

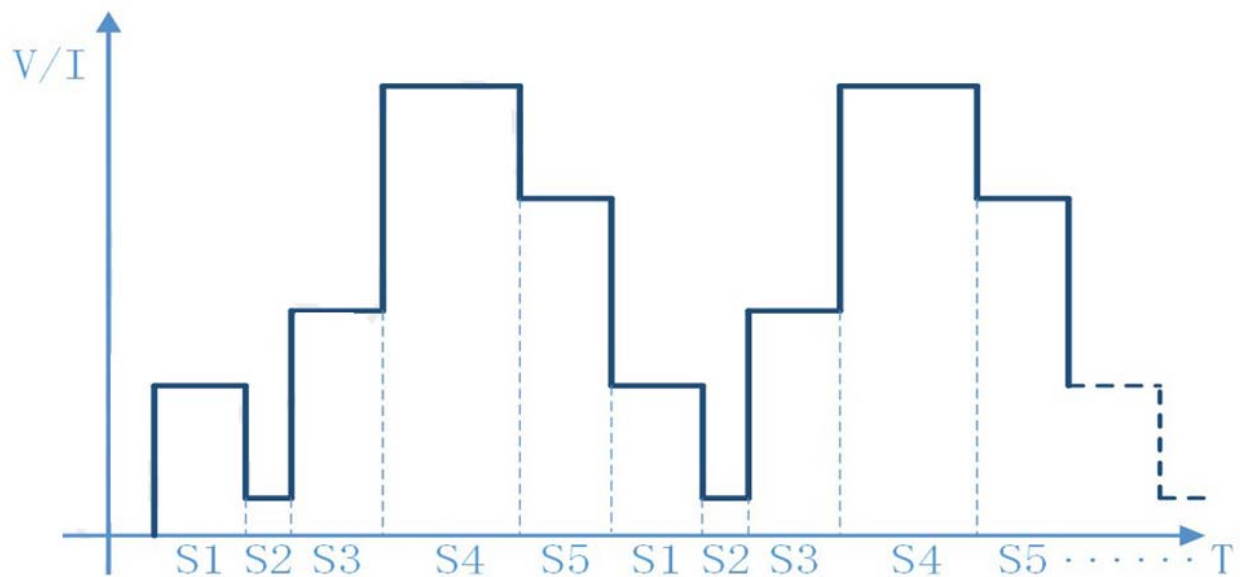
### Automatic wide range output

Under the limit of constant power output, the voltage and current ranges can be automatically switched, which can realize the higher output voltage at low output current and higher current at low output voltage, providing a wider output range under relatively low rated output power. One power supply can achieve the multiple wider voltage and current ranges and greatly improves the utilization rate of the power supply.



### Step mode (sequence programming)

The power supply supports a maximum of 50 sequences. Users can edit the functions of each step according to actual needs, so that the power supply can give output under constant voltage or constant current modes in a sequential manner to meet specific test requirements.

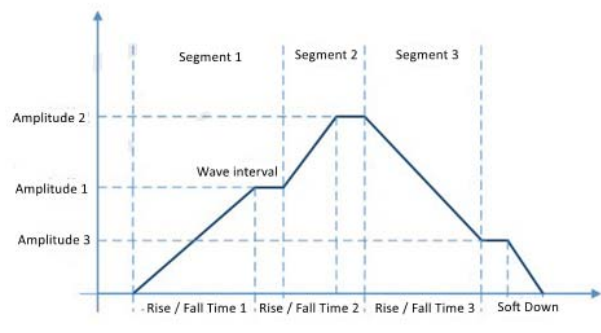
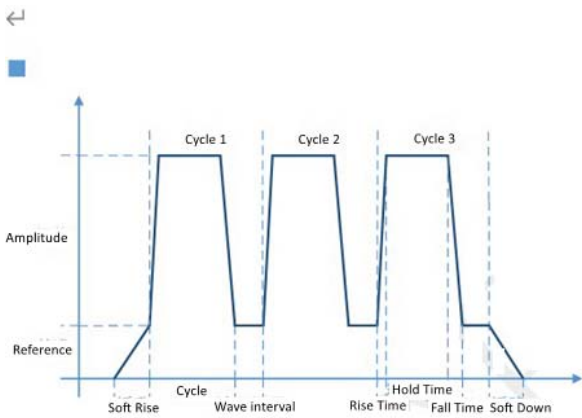
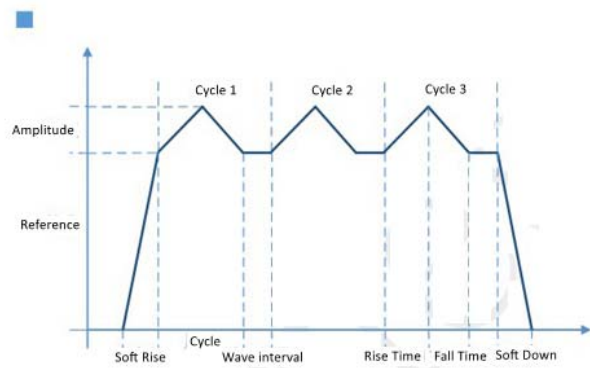
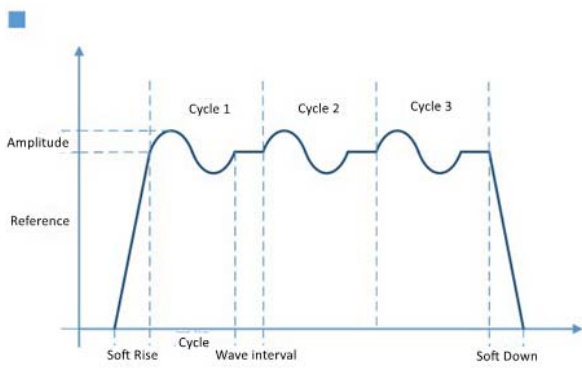


### Charging mode

It is suitable for charging and discharging aging test of different electric energy storage media such as lithium batteries and capacitors. The setting supports a maximum of 10 steps of charging sequence, and each step can independently set the voltage / current reference values and judgment conditions to determine whether to enter the next step or not, and can simulate the fine charging curve.

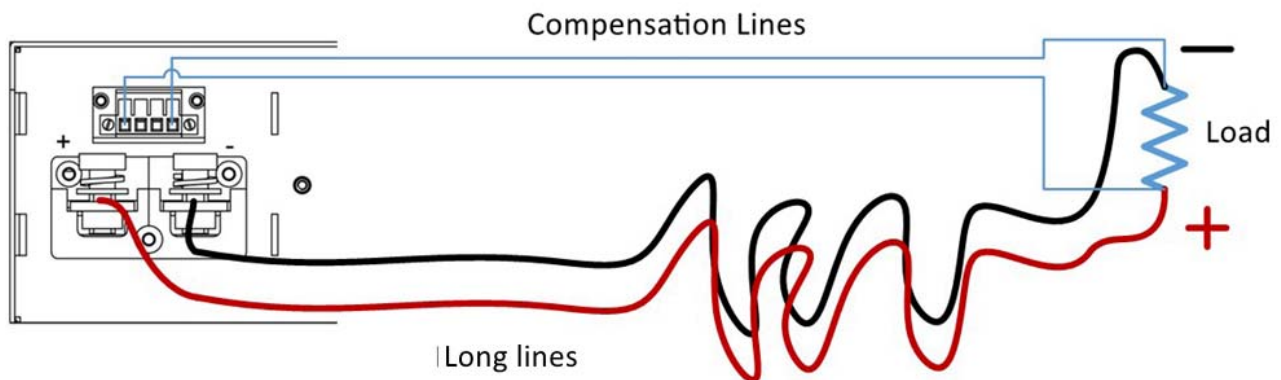
### Function generator mode

A variety of regular waveforms can be generated, such as sine, triangle, sawtooth, trapezoid, step and sawtooth, and a combination of the above waveforms, and by superimposing the edited waveform on the output voltage or current. The preset function will provide users with all necessary parameters, such as a complete set of configuration parameters of reference, number of cycles, waveform amplitude, and time. etc.



## Remote compensation function

This function is used to compensate the voltage drop on the load line to improve the test accuracy. When using the remote compensation function, please remove the two short-connected terminals, and connect PIN1 and PIN4 to the positive and negative terminals of the load (PIN2 and PIN3 are suspended). The maximum compensation voltage is 5V, and the output power after compensation should be less than 1.05 times of the rated power.

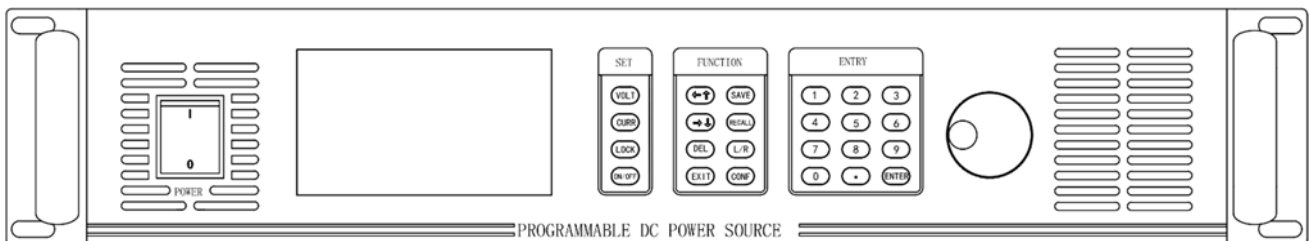


Specifications						
Rated power		1KW	2KW	3KW	6KW	8KW
Input	Phase	Single - phase			Three - phase	
	Voltage	220Vac±10%			380Vac±10%	
	Frequency	50Hz/60Hz				
Output	DC Voltage	Accuracy	< 0.1% of rated value (CV mode)			
		Load regulation (0 ~ 100% load variance)	< 0.05% of rated value			
		Line regulation (±10%ΔUAC)	< 0.05% of rated value			
		Regulation time (10% ~ 100% load variance)	< 5 mS			
		Rise time from 10% to 90% loading	< 10 mS			
		Voltage Compensation	5% of rated voltage value (≤5V)			
		Ripple	< 0.1% of rated value			
	DC Current	Accuracy	< 0.15% of rated value (CC mode)			
		Load regulation (1% ~ 100% load variance)	< 0.15% of rated value			
		Line regulation (±10%ΔUAC)	< 0.05% of rated value			
DC Power	Accuracy	< 0.3% of rated value				
Isolation withstand	AC Input to Shell	1500VDC				
	AC Input to Output	1500VDC				
	DC Output to Shell	500VDC				

Protection functions	Output voltage – limiting protection, output current – limiting protection, output power – limiting protection and over temperature protection		
Communication port	RS232 or RS485 interface In line with MODBUS-RTU standard. CAN interface.		
Node Control (optional)	Dry / Wet contact node signal		
Cooling method	Forced air cooling		
Working temperature	-5°C ~ 45°C		
Storage temperature	-20°C ~ 60°C		
Relative humidity	< 80%(non-condensing)		
Size (W*H*D) (mm)	325*88*450mm	425*88*450mm	425*132*551.5mm
Weight	9KG	11KG	14KG

## Power Supply Front and Rear Panels Description

### Front panel description



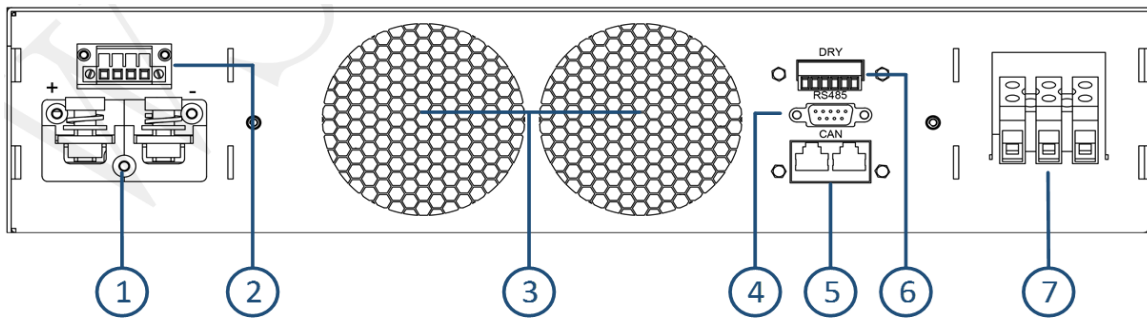
Key button identification	Key button description
VOLT	Voltage reference setting
CURR	Current reference setting
VOLT Double click	Voltage priority switching
CURR Double click	Current priority switching
VOLT+CURR	Power reference setting



LOCK	Lock / Unlock keys
ON/OFF	Turn ON / OFF output
←↑	Left / Up One Position / Line Shift
→↓	Right / Down One Positive / Line Shift
DEL	Delete the current digit
EXIT	Return to the previous level or exit the setting
SAVE	Save the current settings
RECALL	Recall the saved settings
L/R	Local / Remote control mode switch
CONF	Enter the function menu
0~9	Digital input
.	Floating point decimal point "." input
ENTER	Enter the menu / confirm input / switch between the main interface and the sub interface
Knob	<b>Description</b>
	Enter the menu
	Confirm input
Press down	Under the main interface:
	1. Press once to set the voltage reference
	2. Press twice to set the current reference
	3. Press three times to set the power reference

Clockwise	Increase input value (digital setting)
	Move up N rows
Counterclockwise	Decrease input value (digital setting)
	Move down N rows

## Rear panel description



No.	Description
1	DC output terminal, red positive and black negative
2	Voltage remote compensation interface
3	Air outlet of air duct (no obstruction within 10 cm)
4	RS485 / RS232 communication interface
5	CAN communication interface
6	Analog interface wet or dry node
7	AC input connection terminal (pay attention to grounding)

## Standard model list

Rated Power	1KW
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Model	CSPW1000-60	CSPW1000-100	CSPW1000-200	CSPW1000-300	
Rated voltage	60.000V	100.00V	200.00V	300.00V	
Rated current	30.000A	15.000A	8.0000A	5.0000A	
Remote interface	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232	
Rated Power	2KW				
Model	CSPW2000-45	CSPW2000-60	CSPW2000-80	CSPW2000-100	CSPW2000-150
Rated voltage	45.000V	60.000V	80.000V	100.00V	150.00V
Rated current	100.00A	80.000A	60.000A	45.000A	30.000A
Remote interface	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232
Model	CSPW2000-200	CSPW2000-300	CSPW2000-400	CSPW2000-500	CSPW2000-600
Rated voltage	200.00V	300.00V	400.00V	500.00V	600.00V
Rated current	23.000A	15.000A	12.000A	9.0000A	8.0000A
Remote interface	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232
Rated Power	3KW				
Model	CSPW3000-45	CSPW3000-60	CSPW3000-80	CSPW3000-100	CSPW3000-150
Rated voltage	45.000V	60.000V	80.000V	100.00V	150.00V
Rated current	100.00A	80.000A	60.000A	45.000A	30.000A
Remote interface	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232
Model	CSPW3000-200	CSPW3000-300	CSPW3000-400	CSPW3000-500	CSPW3000-600
Rated voltage	200.00V	300.00V	400.00V	500.00V	600.00V
Rated current	23.000A	15.000A	12.000A	9.0000A	8.0000A

Remote interface	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232
Rated Power	6KW				
Model	CSPW6000-150	CSPW6000-300	CSPW6000-600	CSPW6000-1000	
Rated voltage	150.00V	300.00V	600.00V	1000.00V	
Rated current	100.000A	50.000A	25.000A	15.000A	
Remote interface	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232	
Rated Power	8KW				
Model	CSPW8000-150	CSPW8000-300	CSPW8000-600	CSPW8000-1000	
Rated voltage	150.00V	300.00V	600.00V	1000.00V	
Rated current	100.000A	50.000A	25.000A	15.000A	
Remote interface	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232	CAN, RS485/RS232	

## Installation environment

- Ambient temperature: Please have the power source working in safe temperature range (0°C ~ 45°C) or it would affect life of power source.
- Please install the power source at least 50cm distant from surroundings to have better ventilation.
- Please install the power source away from vibration (less than 0.6G), especially equipment like puncher.
- Keep the power source away from direct sunshine, humidity or place with water globule.
- Keep the power source from corrosive, flammable & explosive gas.
- Keep the power source away from oil stain, dust & metallic dust.