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HIGH PERFORMANCE POWER SUPPLY

C3000 SERIES



Low voltage version

The C3000 Series is a high-precision programmable DC power supply boasting wide current range, high dynamic performance, and ultra-high power density. Featuring auto-range output and flexible voltage & current combinations, the C3000 Series is widely used in industries such as PV, EV, and aviation.

Features

- | High power density: 15kW in 3U

| Power output range: 0 ~ 15kW

| Current output range: 0 ~ 600A

| Voltage output range: 0 ~ 100V

| Parallel connection: up to 10 units

| AC voltage input: 342VAC ~ 528VAC
- | PV simulation: Static MPPT, Multi-IV, EN50530, etc.

| Custom waveforms: triangle, square, and sine

| Automotive power curve: ISO16750-2, LV123, DIN40839, etc.

| RS232/LAN/USB communication interface

| Protections: OVP, OCP, OTP, OPP, etc.

| Remote voltage compensation

Model Selection

Model	Voltage	Current	Power	Resolution	Accuracy	Size
Normal						
C3000NG-10K-0100-0400	100V	400A	10kW	0.01V/0.01A	≤0.02%F.S./≤0.1% F.S.	3U
C3000NG-15K-0100-0600	100V	600A	15kW	0.01V/0.01A	≤0.02%F.S./≤0.1% F.S.	3U
Pro						
C3000PG-10K-0100-0400	100V	400A	10kW	0.01V/0.01A	≤0.02%F.S./≤0.1% F.S.	3U
C3000PG-15K-0100-0600	100V	600A	15kW	0.01V/0.01A	≤0.02%F.S./≤0.1% F.S.	3U

- Normal

Fundamental, Cost-effective
- Pro

Fully-featured, Multi-scenario

Version	Normal	Pro
DC power supply	★	★
IV simulation	-	★
Automotive power curve	-	★

Note: "★" means Yes; "-" means not available.

Product Applications

- | Testing grid-connected PV inverters

| Testing motor controllers

| Testing DCDC converters

| Power semiconductor devices

| Automotive electronic components testing
- | Air compressors

| Military industry, avionics

| Telecom power

| DC contactor test



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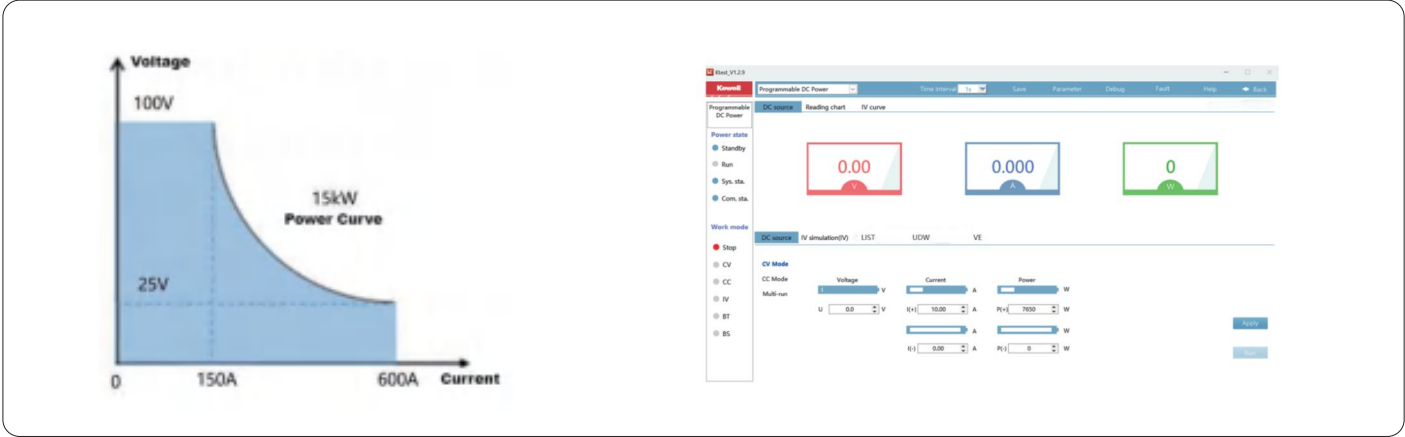
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Product Functions

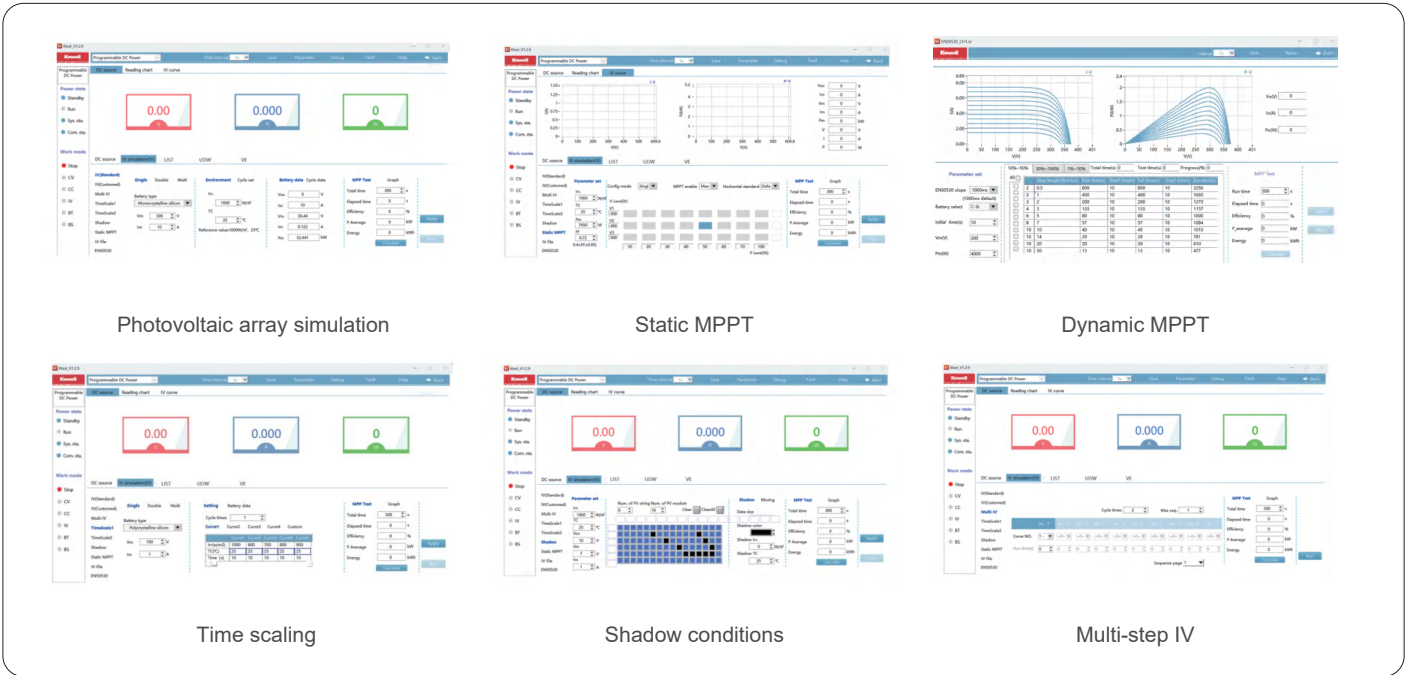
DC Power Supply

Steady auto ranging output of 0-100V. The maximum power output for a single machine can reach 15kW. C3000 supports up to 999 editable work steps, and work steps can be set in cycles.



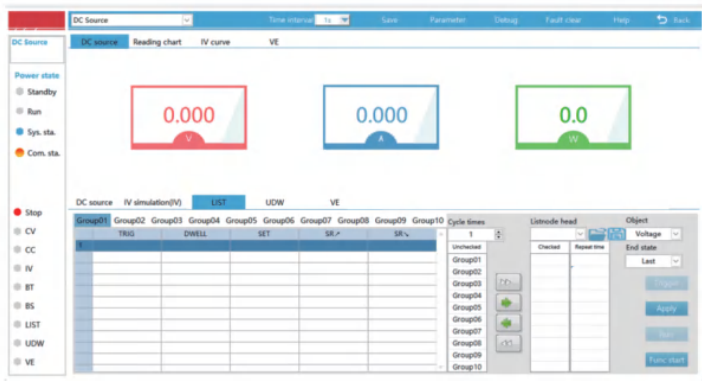
IV Simulation

The C3000 Series has a variety of IV simulation capabilities, which make the PV test closer to the real-world conditions. These include single point, double-point, multi-point settings, as well as static and dynamic MPPT, time scaling, shadow conditions, and multi-step IV function.



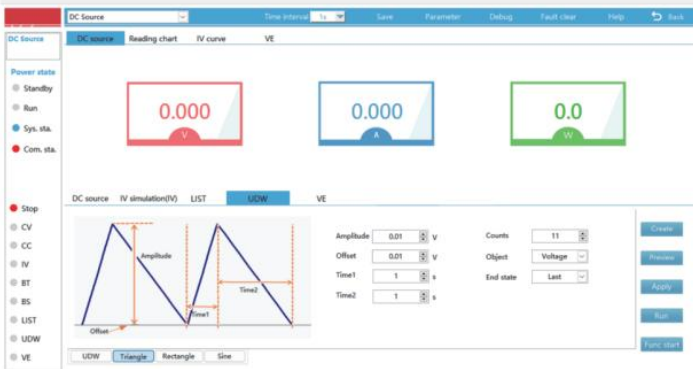
List Mode

List mode supports file programming for 10 groups, each having up to 10 arrays to be edited. Single step time can be set to 1ms at minimum.



Custom Waveforms

Built-in triangle, square and sine waveforms.



Automotive Power Curve

Built-in industry standards such as ISO16750-2, LV123, DIN40839, etc., one click to call.



C3000 SERIES HIGH PERFORMANCE POWER SUPPLY

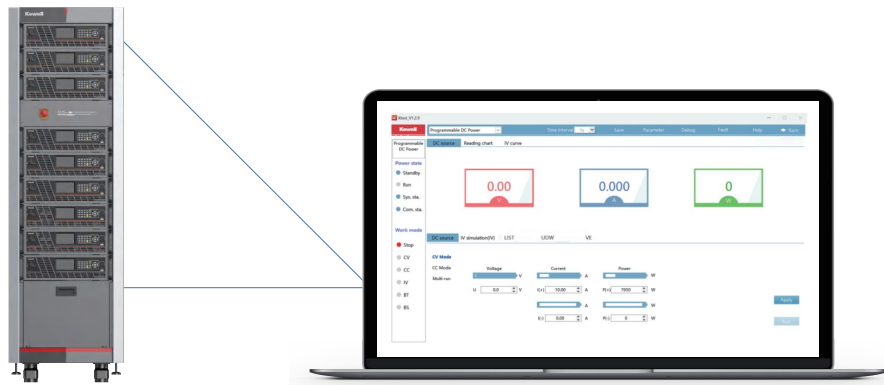
Product Highlights

Ultra-high Efficiency



Max. power efficiency: 92%

Flexible Paralleling



The maximum power of the C3000 Series single machine is 15kW, and through the flexible parallel connection of up to 10 devices, the power output can reach 150kW. One computer can control up to 24 devices at the same time.

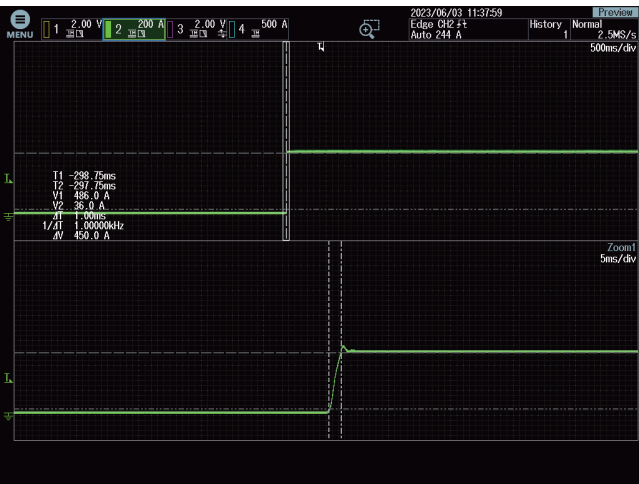
Super Dynamic Performance

- High Voltage/Current accuracy

The C3000PG Series accuracy can reach 0.02% F.S. and 0.1% F.S. with respect to voltage and current, respectively.

- Rapid dynamic response

The current slope is up to 450A/ms. Microsecond response for sudden loading/unloading, with response time as short as 500us.



Standard Accessories

1 set of DC power supply, 1 set of handles, 1 * USB stick (32G), 1 * parallel cable, 1 * Ethernet cable (3m), 1 * DC protective cover, 1 * AC protective cover.

HIGH PERFORMANCE POWER SUPPLY

C3000 SERIES



High voltage version

The C3000 Series is a high-precision programmable DC power supply boasting wide voltage range, high dynamic performance, and ultra-high power density. Featuring auto-range output and flexible voltage & current combinations, the C3000 Series is widely used in industries such as PV, EV, and aviation.

Features

- High power density design: 30kW in 3U

Power output range: 0 ~ 30kW

Current output range: 0 ~ 180A

Voltage output range: 0 ~ 2000V

Parallel connection: up to 20 units
- AC voltage input: 342VAC ~ 528VAC

PV simulation: Static MPPT, Multi-IV, EN50530, etc.

RS485/CAN/LAN/USB communication interface

Protections: OVP, OCP, OTP, OPP, etc.

Model Selection

Model	Voltage	Current	Power	Resolution	Accuracy	Size
Normal						
C3000NG-7K5-0750-0060	750V	60A	7.5kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
C3000NG-15K-0750-0120	750V	120A	15kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
C3000NG-30K-0750-0180	750V	180A	30kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
C3000NG-15K-1500-0060	1500V	60A	15kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
C3000NG-21K-2000-0060	2000V	60A	21kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
C3000NG-30K-2000-0060	2000V	60A	30kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
Pro						
C3000PG-7K5-0750-0060	750V	60A	7.5kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
C3000PG-15K-0750-0120	750V	120A	15kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
C3000PG-30K-0750-0180	750V	180A	30kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
C3000PG-15K-1500-0060	1500V	60A	15kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
C3000PG-21K-2000-0060	2000V	60A	21kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
C3000PG-30K-2000-0060	2000V	60A	30kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U

Normal

Fundamental, Cost-effective

Pro

Fully-featured, Multi-scenario

Version	Normal	Pro
Features		
DC power supply	★	★
IV simulation	-	★

Note: "★" means Yes; "-" means not available.

Product Applications

- Testing grid-connected PV inverters

Testing motor controllers

Testing DCDC converters

Power semiconductor devices
- Military industry, avionics

Telecom power

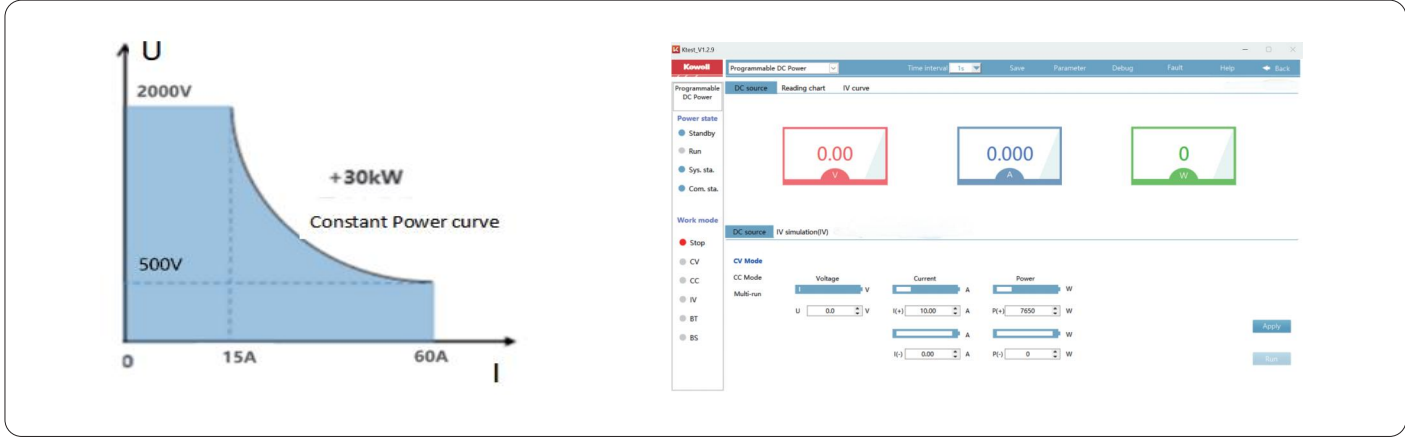
High voltage contactors

Air compressors

Product Functions

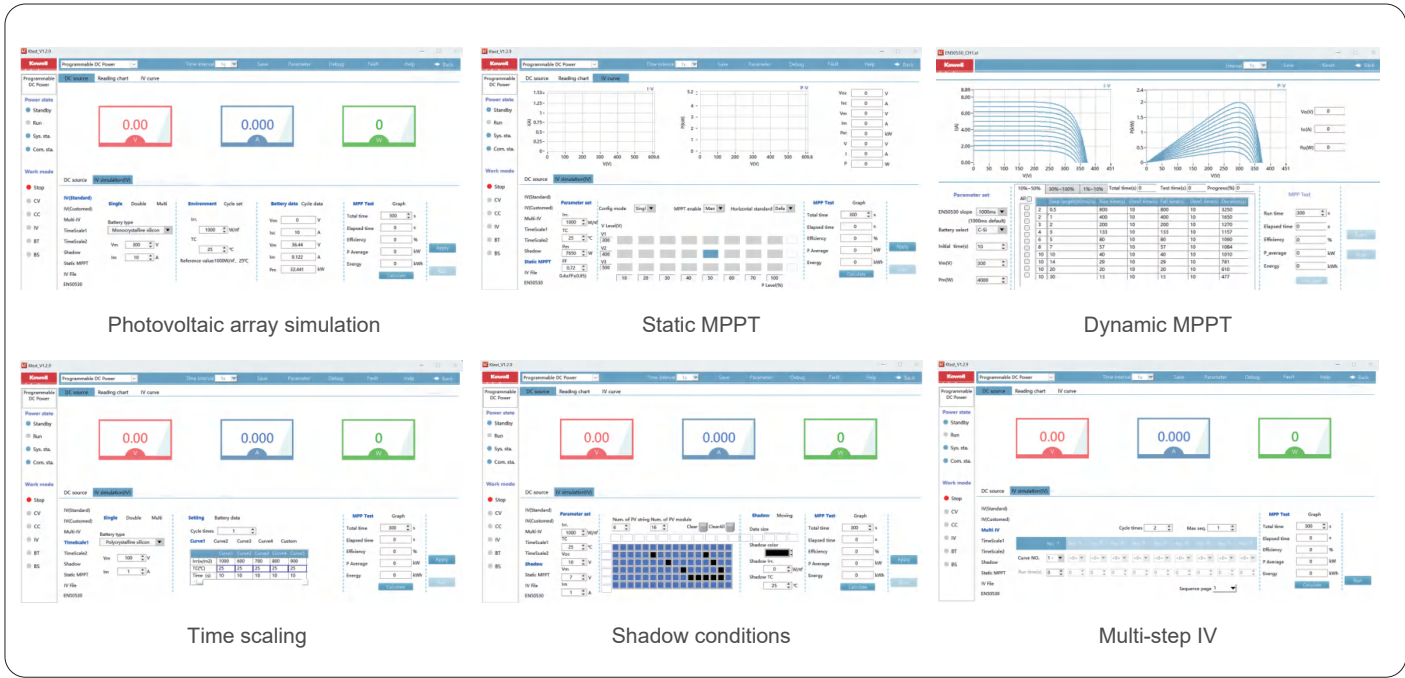
DC Power Supply

Steady auto ranging output of 0-2000V. The maximum power output for a single machine can reach 30kW. C3000 supports up to 999 editable work steps, and work steps can be set in cycles.



IV Simulation

The C3000 Series has a variety of IV simulation capabilities, which make the PV test closer to the real-world conditions. These include single point, double-point, multi-point settings, as well as static and dynamic MPPT, time scaling, shadow conditions, and multi-step IV function.

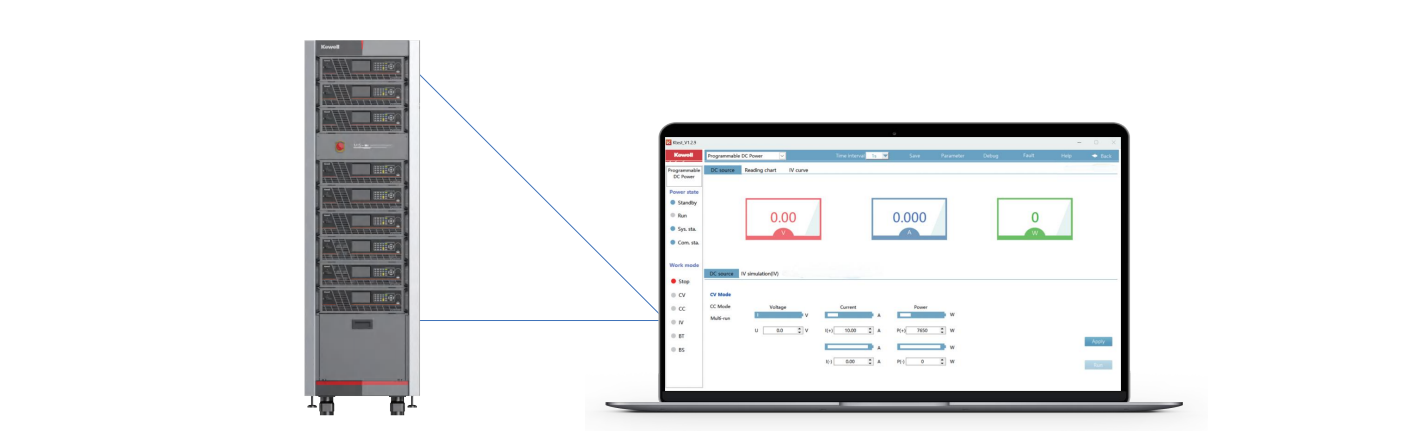


Product Highlights

Ultra-high Efficiency



Flexible Paralleling



The maximum power of the C3000 Series single machine is 30kW, and through the flexible parallel connection of up to 20 devices, the power output can reach 600kW. One computer can control up to 48 devices at the same time.

Product Highlights

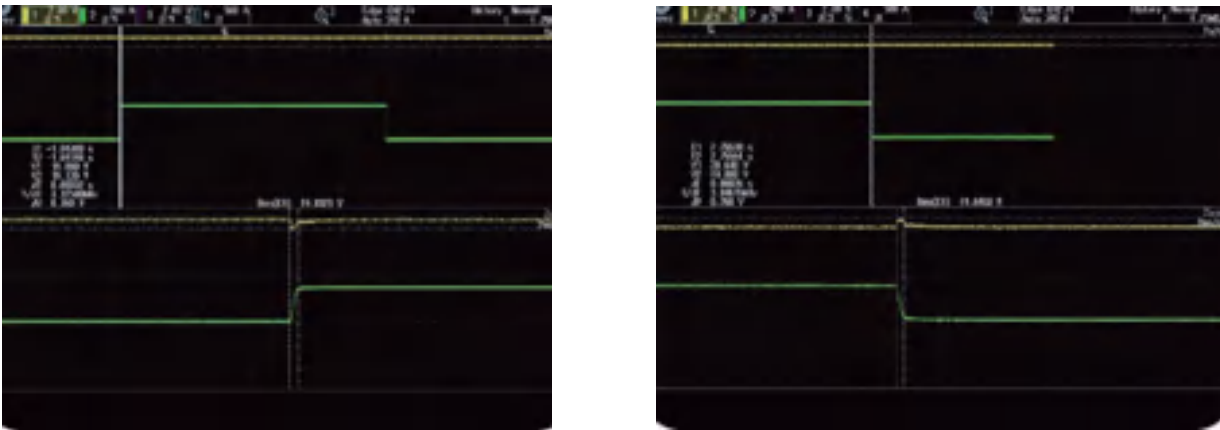
Super Dynamic Performance

- High Voltage/Current accuracy

The C3000PG Series accuracy can reach 0.05% F.S. and 0.1% F.S. with respect to voltage and current, respectively.

- Rapid dynamic response

Microsecond response for sudden loading/unloading, with response time as short as 1ms.



Standard Accessories

1 set of DC power supply, 1 set of handles, 1 * USB stick (32G), 1 * Ethernet cable (0.8m), 1 * Ethernet cable (0.25m), 1 * Ethernet cable (3m), 1 * DC protective cover, 1 * AC protective cover.



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BI-DIRECTIONAL PROGRAMMABLE DC POWER SUPPLY

S7000 SERIES



Low voltage version

The S7000 Series is a high precision, regenerative DC power source. As a DC source, it supports dual quadrant energy flow, with high conversion efficiency and high power density. It also supports parallel operation of multiple devices. HMI: Colorful touch-screen and knob.

Features

- | Automatic switching of source-load function

| Power output range: 0 ~ 15kW

| Current output range: 0 ~ 600A

| Voltage output range: 0 ~ 100V

| Parallel connection: up to 10 units

| AC voltage input: 342VAC ~ 528VAC

| PV simulation: Static MPPT, Multi-IV, EN50530, etc.

| Automotive power curve: ISO16750-2, LV123, DIN40839,
- | Battery simulation: 6 fixed types, custom type

| Battery charging and discharging test function

| List mode, support multi-step programming

| Custom waveforms: triangle, square, and sine.

| RS232/LAN/USB communication interface

| Protections: OVP, OCP, OTP, OPP, etc.

| Remote voltage compensation

Model Selection

Model	Voltage	Current	Power	Resolution	Accuracy	Size
Normal						
S7000NG-10K-0100-0400	100V	400A	10kW	0.01V/0.01A	≤0.02%F.S./≤0.1% F.S.	3U
S7000NG-15K-0100-0600	100V	600A	15kW	0.01V/0.01A	≤0.02%F.S./≤0.1% F.S.	3U
Pro						
S7000PG-10K-0100-0400	100V	400A	10kW	0.01V/0.01A	≤0.02%F.S./≤0.1% F.S.	3U
S7000PG-15K-0100-0600	100V	600A	15kW	0.01V/0.01A	≤0.02%F.S./≤0.1% F.S.	3U
Ultra						
S7000UG-15K-0100-0600	100V	600A	15kW	0.01V/0.01A	≤0.02%F.S./≤0.1% F.S.	3U

Normal
Fundamental,
Cost-effective

Pro
Fully-featured,
Multi-scenario

Ultra
Ultimate experience,
Lab testing-oriented

Features \ Version	Version		
	Normal	Pro	Ultra
Bidirectional DC power supply	★	★	★
IV simulation	-	★	★
Battery simulation	-	★	★
Battery test	-	★	★
Automotive power curve	-	★	★
DC electronic load	-	-	★

Note: "★" means Yes; "-" means not available.

Product Applications

- | Testing grid-connected PV inverters

| Testing PCS

| Testing PV & storage converters

| Testing on-board chargers

| Testing DC charging piles

| Testing motor controllers

| Testing UPS, EPS systems
- | Testing DCDC converters

| Power semiconductor devices

| Military industry, avionics

| Telecom power

| Air compressors

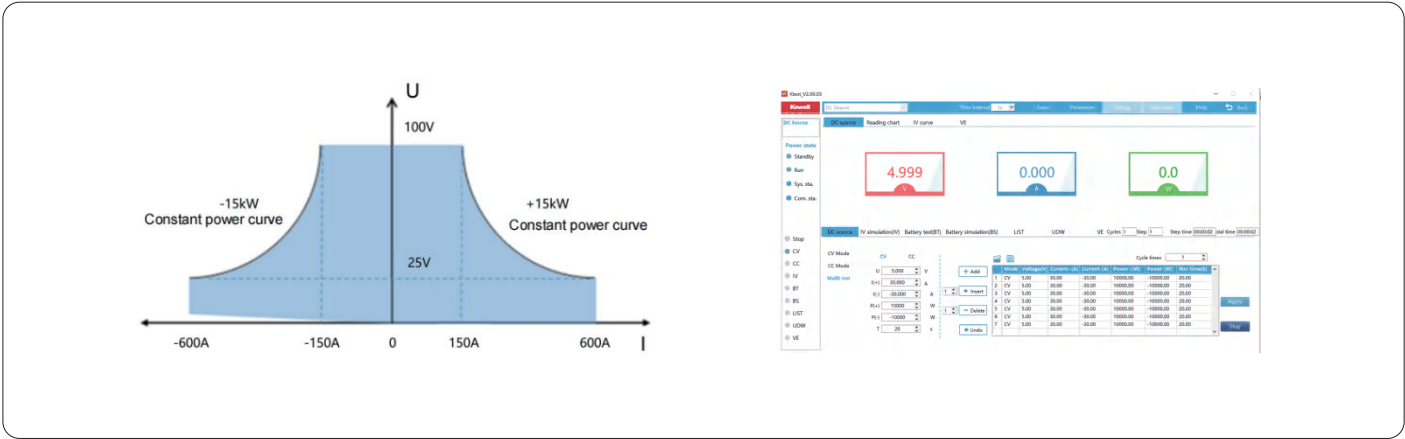
| High voltage contactors

S7000 SERIES BI-DIRECTIONAL PROGRAMMABLE DC POWER SUPPLY

Product Functions

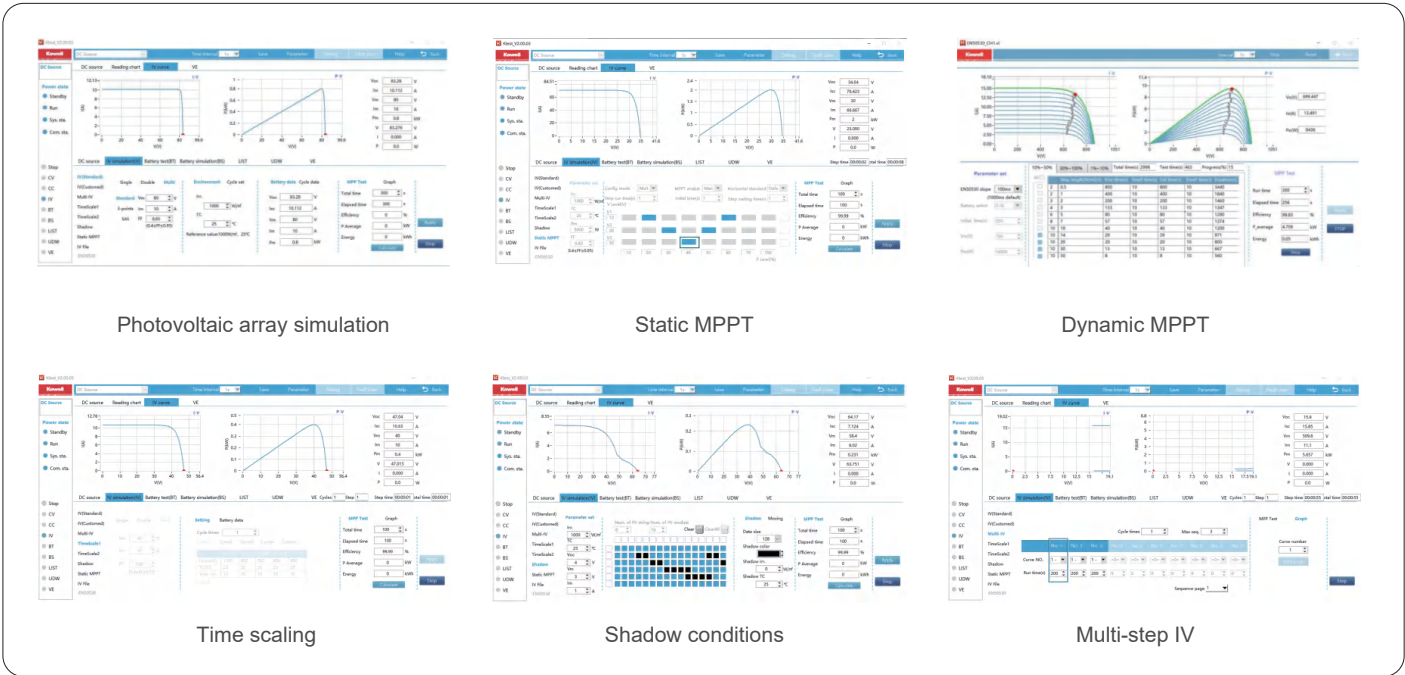
Bi-directional DC Power Supply

S7000 is a bi-directional power supply featuring high-speed switching between source and load modes. S7000 supports up to 999 editable work steps, and work steps can be set in cycles.



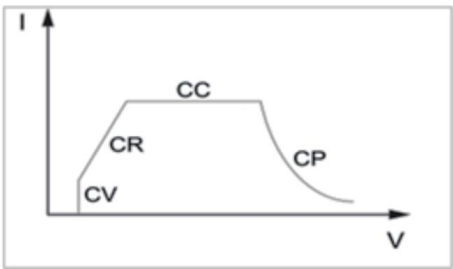
IV Simulation

The S7000 series has a variety of IV simulation capabilities, which make the PV test closer to the real-world conditions. These include single point, double-point and multi-point settings, as well as static and dynamic MPPT, time scaling, shadow conditions, and multi-step IV function.



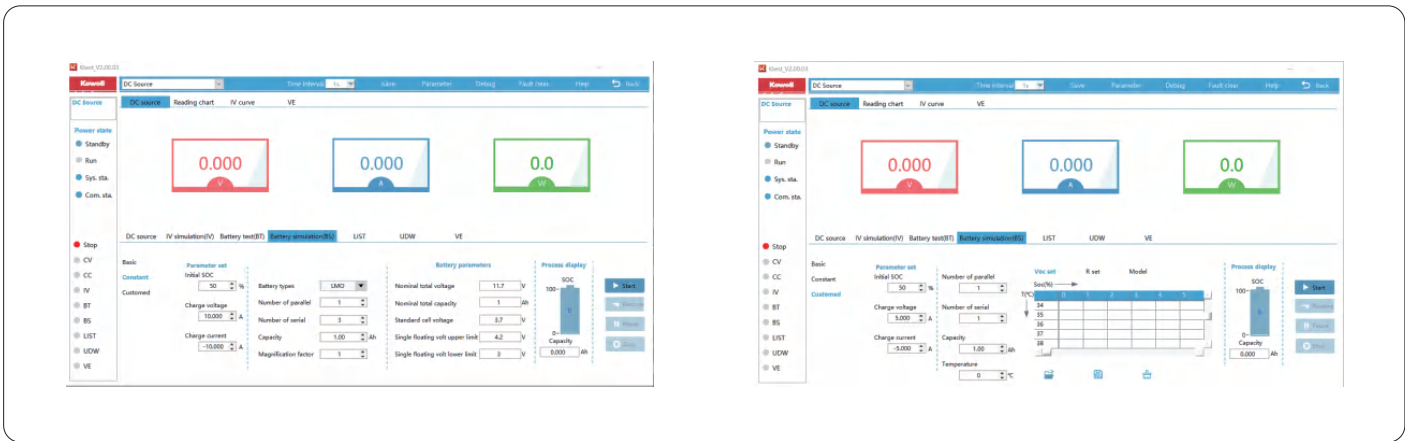
DC Electronic Load

S7000 has the regenerative load function, with basic operation modes: CC, CV, CP, CR and compound operation modes: CV+CC, CV+CR, CC+CR, CV+CC+CP+CR to meet a variety of load test requirements.



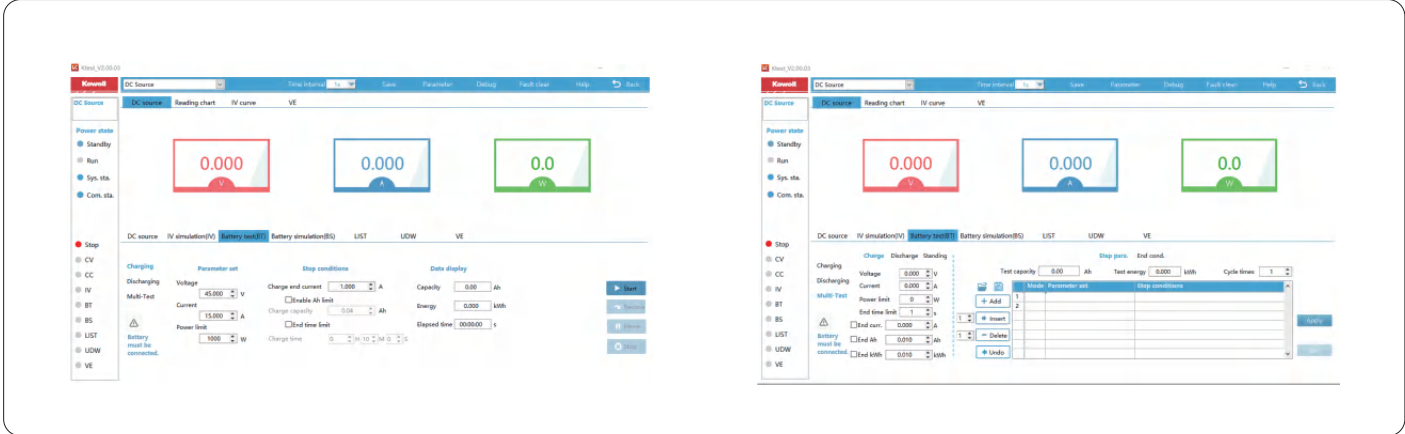
Battery Simulation

S7000 supports fixed battery types and custom battery type. For constant simulation mode, it supports fixed battery types: lithium manganese oxide, lithium cobalt oxide, lithium iron carbonate, nickel-metal hydride batteries, ternary lithium, and lithium titanate. Custom battery type: At a given temperature and SoC, fill in the open circuit voltage and internal resistance, or import the Excel file written in advance, then set other parameters and start running.



Battery Test

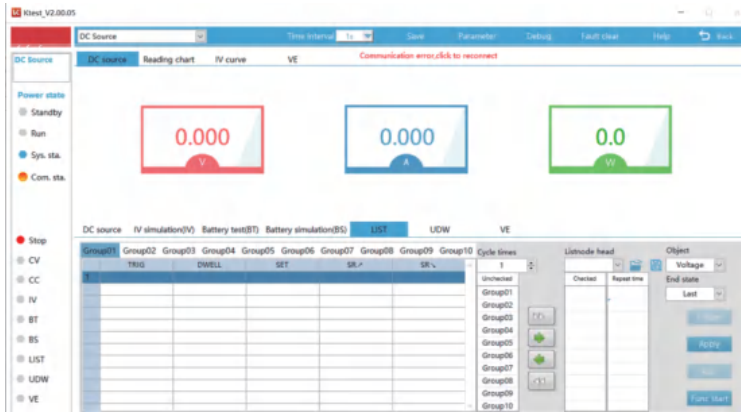
S7000 supports charge mode, discharge mode, and charging and discharging test in multiple modes.



S7000 SERIES BI-DIRECTIONAL PROGRAMMABLE DC POWER SUPPLY

List Mode

List mode supports file programming for 10 groups, each having up to 10 arrays to be edited. Single step time can be set to 1ms at minimum.



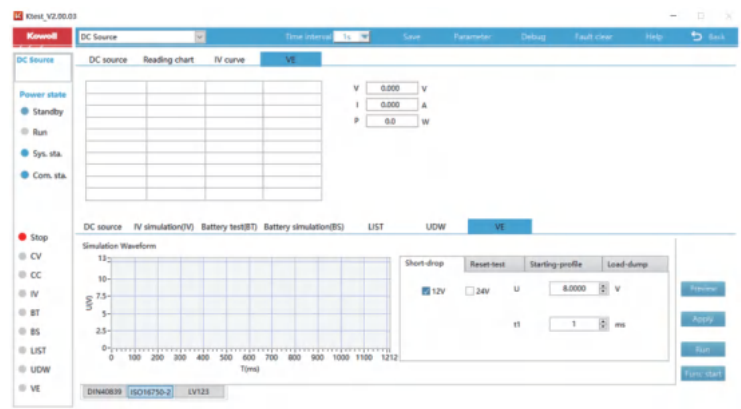
Custom Waveforms

Built-in triangle, square and sine waveforms.



Automotive Power Curve

Built-in industry standards such as ISO16750-2, LV123, DIN40839, etc., one click to call.



Product Highlights

High Efficiency



Max. power efficiency: **92%**

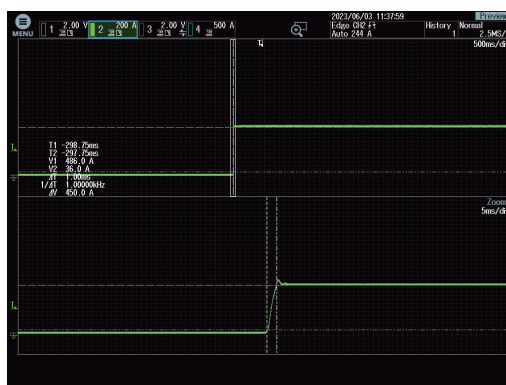
Flexible Paralleling



The maximum power of the S7000 series single machine is 15kW, and through flexible parallel connection of up to 10 devices, the power output can reach 150kW. One computer can control up to 24 devices at the same time.

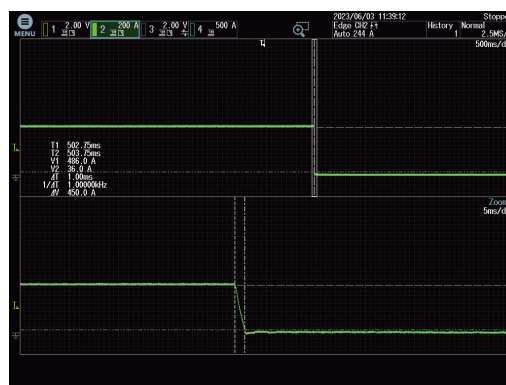
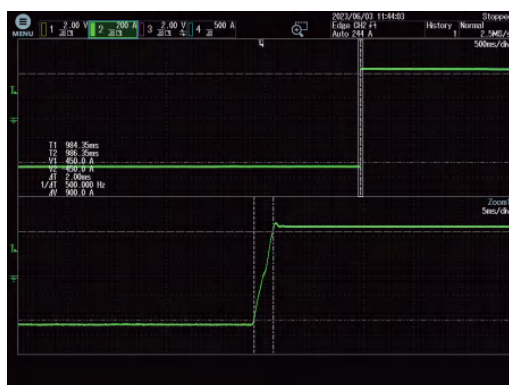
Super Dynamic Performance

- Current slope up to 450A/ms



- High dynamic performance of DC current

The S7000 series current fall slope is adjustable from 0.001A/ms to 450A/ms. High-speed response with response time as short as 500μs.



Standard Accessories

1 set of DC power supply, 1 set of handles, 1 * USB stick (32G), 1 * parallel cable, 1 * Ethernet cable (3m), 1 * DC protective cover, 1 * AC protective cover.

BI-DIRECTIONAL PROGRAMMABLE DC POWER SUPPLY

— S7000 SERIES —



High voltage version

The S7000 Series is a high precision, regenerative DC power source. As a DC source, it supports dual quadrant energy flow, with high conversion efficiency and high power density. In 3U size, it outputs power up to 30kW and voltage up to 2000V. It supports parallel operation of multiple devices. HMI: Colorful touchscreen and knob. S7000 is applicable to testing of battery, battery storage inverter, EV, etc.

Features

- | Automatic switching of source-load function

| High power density: 30kW in 3U

| Power output range: 0 ~ 30kW

| Voltage output range: 0 ~ 2000V

| Parallel connection: up to 20 units

| AC voltage input: 342VAC ~ 528VAC
- | PV simulation: Static MPPT, Multi-IV, EN50530, etc.

| Battery simulation: 6 fixed types, custom type

| Battery charging and discharging test function

| RS485/CAN/LAN/USB communication interface

| Protections: OVP, OCP, OTP, OPP, etc.

| Remote voltage compensation

Model Selection

Model	Voltage	Current	Power	Resolution	Accuracy	Size
Normal						
S7000NG-7K5-0750-0060	750V	60A	7.5kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
S7000NG-15K-0750-0120	750V	120A	15kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
S7000NG-30K-0750-0180	750V	180A	30kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
S7000NG-15K-1500-0060	1500V	60A	15kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
S7000NG-21K-2000-0060	2000V	60A	21kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
S7000NG-30K-2000-0060	2000V	60A	30kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
Pro						
S7000PG-7K5-0750-0060	750V	60A	7.5kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
S7000PG-15K-0750-0120	750V	120A	15kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
S7000PG-30K-0750-0180	750V	180A	30kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
S7000PG-15K-1500-0060	1500V	60A	15kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
S7000PG-21K-2000-0060	2000V	60A	21kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
S7000PG-30K-2000-0060	2000V	60A	30kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
Ultra						
S7000UG-30K-0750-0180	750V	180A	30kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
S7000UG-15K-1500-0060	1500V	60A	15kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
S7000UG-21K-2000-0060	2000V	60A	21kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
S7000UG-30K-2000-0060	2000V	60A	30kW	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U

Normal
Fundamental,
Cost-effective

Pro
Fully-featured,
Multi-scenario

Ultra
Ultimate experience,
Lab testing-oriented

Version	Normal	Pro	Ultra
Features			
Bidirectional DC power supply	★	★	★
IV simulation	-	★	★
Battery simulation	-	★	★
Battery test	-	★	★
DC electronic load	-	-	★

Note: "★" means Yes; "-" means not available.

Product Applications

- Testing grid-connected PV inverters

Testing PCS

Testing PV & storage converters

Testing on-board chargers

Testing DC charging piles

Testing UPS, EPS systems
- Testing motor controllers

Testing DCDC converters

Power semiconductor devices

Military industry, avionics

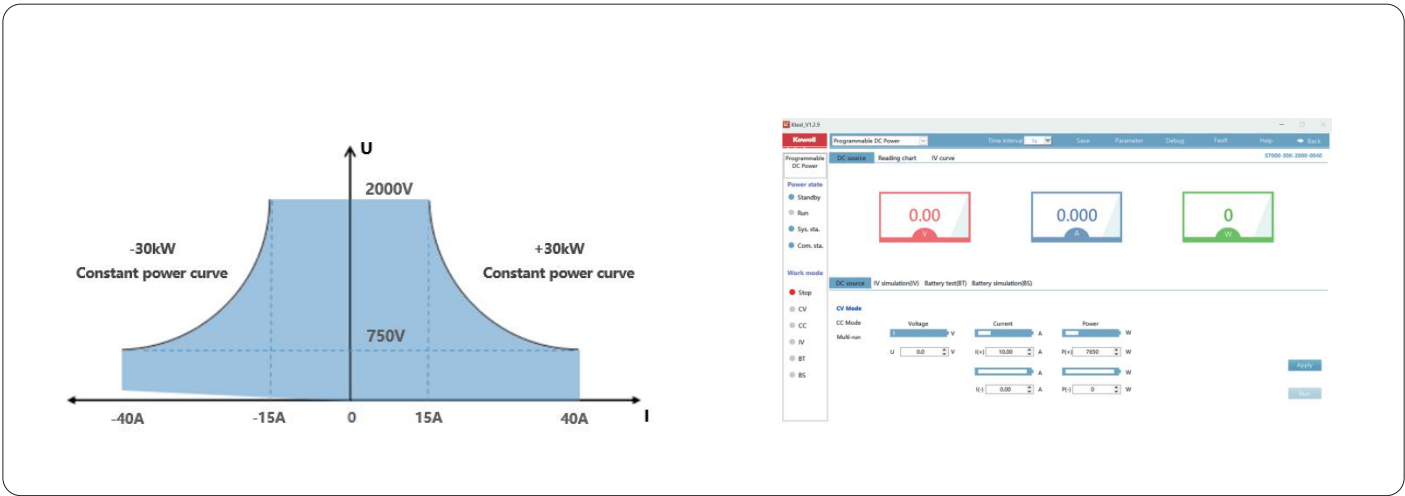
Telecom power

Air compressors

Product Functions

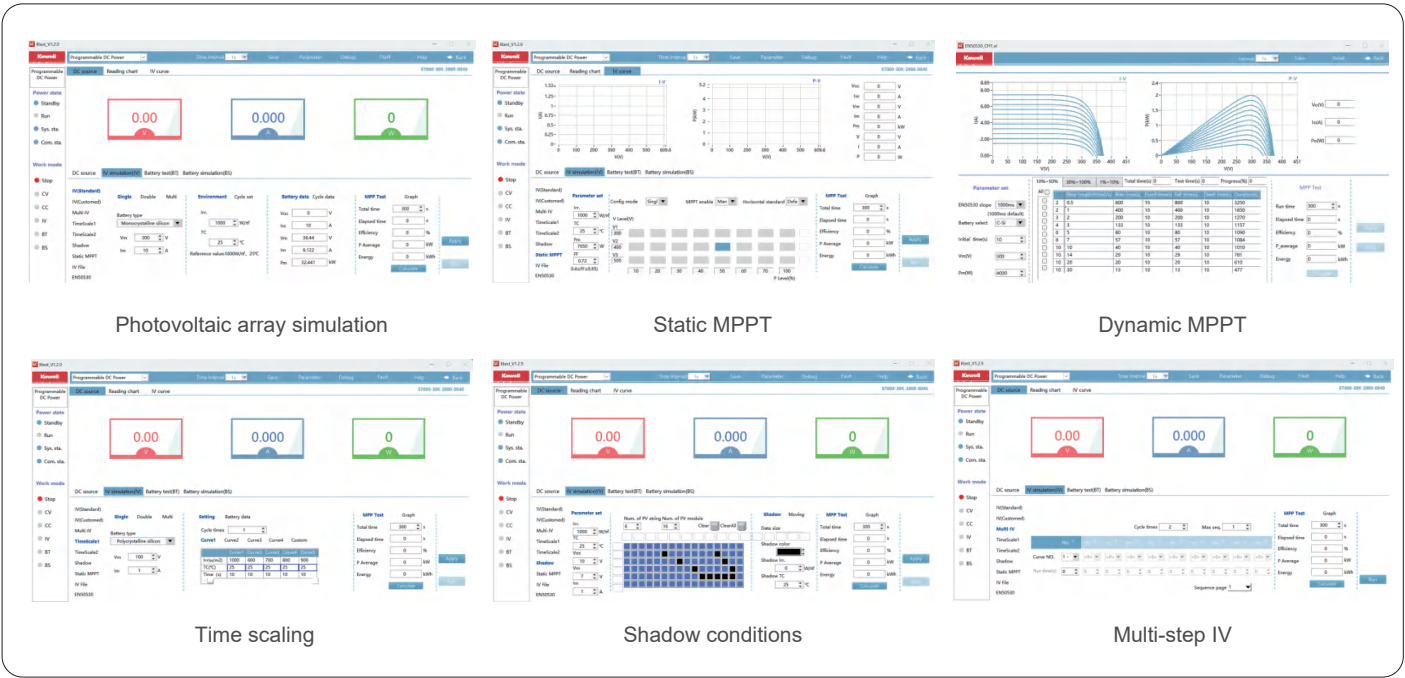
Bi-directional DC Power Supply

S7000 is a bi-directional power supply featuring high-speed switching between source and load modes. S7000 supports up to 999 editable work steps, and work steps can be set in cycles.



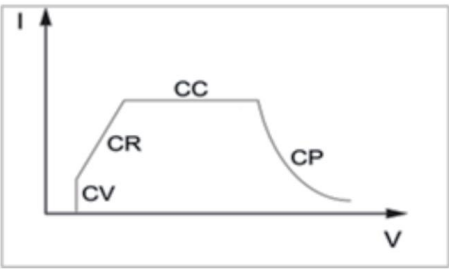
IV Simulation

The S7000 series has a variety of IV simulation capabilities, which make the PV test closer to the real-world conditions. These include single point, double-point, multi-point settings, as well as static and dynamic MPPT, time scaling, shadow conditions, and multi-step IV functions.



DC Electronic Load

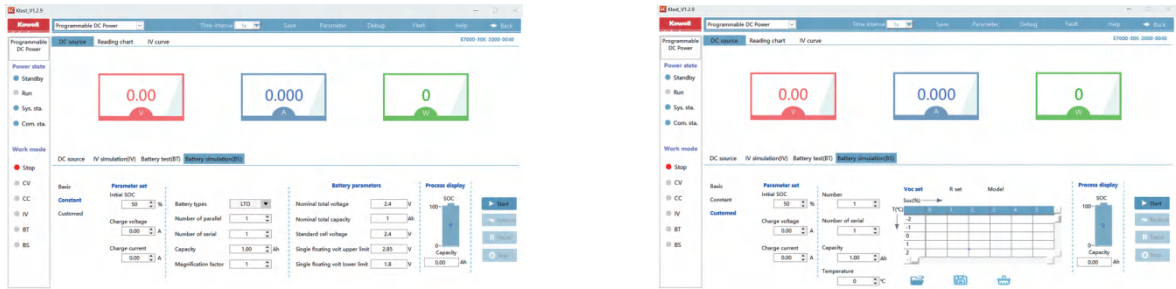
S7000 has the regenerative load function, with basic operation modes: CC, CV, CP, CR and compound operation modes: CV+CC, CV+CR, CC+CR, CV+CC+CP+CR to meet a variety of load test requirements.



S7000 SERIES BI-DIRECTIONAL PROGRAMMABLE DC POWER SUPPLY

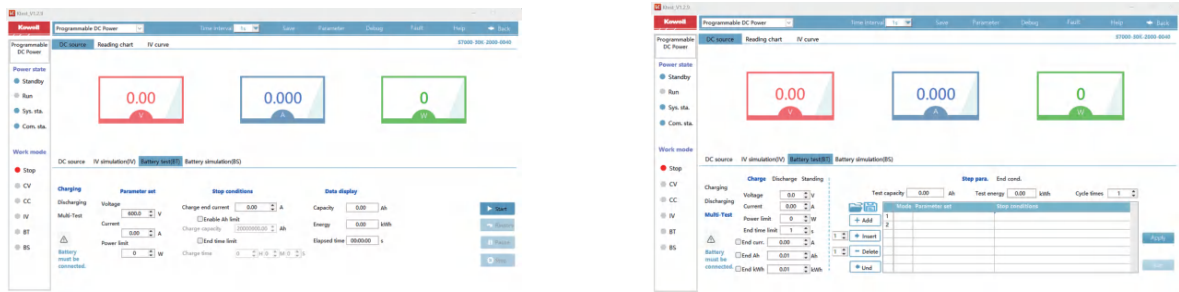
Battery Simulation

S7000 supports fixed battery type and custom battery type. For constant simulation mode, it supports fixed battery type: lithium manganese oxide, lithium cobalt oxide, lithium iron carbonate, nickel-metal hydride batteries, ternary lithium, lithium titanate. Custom battery type: At a given temperature and SoC, fill in the open circuit voltage and internal resistance, or import the Excel file written in advance, then set other parameters and start running.



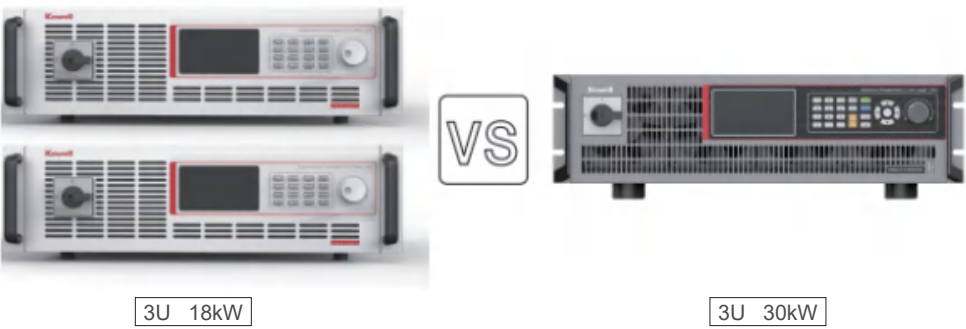
Battery Test

S7000 supports charge mode, discharge mode, and charging and discharging test in multiple modes.



Product Highlights

High Efficiency



30kW in 3U, up by 67% compared to the conventional 18kW DC power supply in the industry!

Ultra-high Efficiency



Max. efficiency: about 95%

S7000 SERIES BI-DIRECTIONAL PROGRAMMABLE DC POWER SUPPLY

Flexible Paralleling



The maximum power of the S7000 series single machine is 30kW, and through flexible parallel connection of up to 20 devices, the power output can reach 600kW. One computer can control up to 48 devices at the same time.

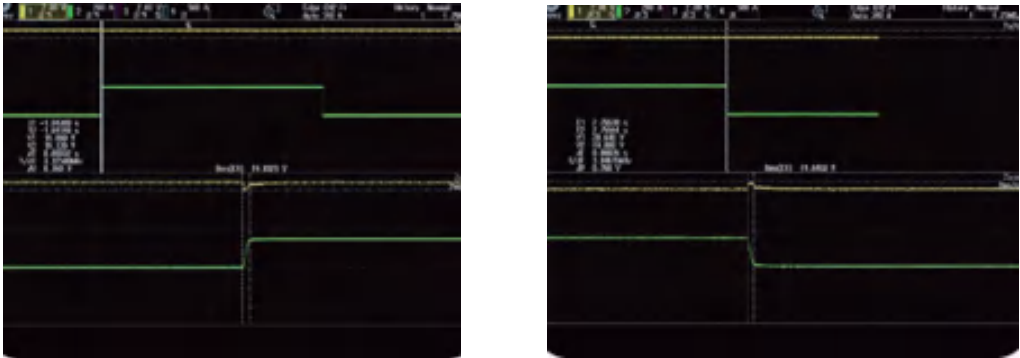
Super Dynamic Performance

- Voltage slew rate $\geq 200\text{V/ms}$



- High dynamic performance of DC voltage

The S7000 series voltage fall slew rate is adjustable from 0.001V/ms to 200V/ms. High-speed response with response time as short as 1ms.



Standard Accessories

1 set of DC power supply, 1 set of handles, 1 * USB stick (32G), 1 * Ethernet cable (0.8m), 1 * Ethernet cable (0.25m), 1 * Ethernet cable (3m), 1 * DC protective cover, 1 * AC protective cover.

BI-DIRECTIONAL PROGRAMMABLE DC POWER SUPPLY

D2000-EV SERIES



Adopting the new modular design, Kewell has launched the second-generation bi-directional programmable high-power DC power supply, D2000-EV series. The D2000-EV series features the third-generation SiC design, boasting high precision, high power density, high dynamic response, and high efficiency. D2000-EV supports DC source mode, regenerative electronic load, and battery simulation function.

Features

- | Third-generation SiC design

| Bi-directional DC power supply

| Regenerative electronic load

| Electrically operated switch + TFT touch screen

| Multi-step programming

| Voltage output range: 12~1200V

| Current output range: 0~1200A
- | Efficiency: up to 95.5%

| CV/CC/CR/CP in load mode

| 7 fixed battery types for battery simulation

| 1st/2nd/3rd order battery models

| Parallel connection to as high as 2.4MW

| Maximum power density: 176kW/m3

| Comm. interface: RS485, LAN, and CAN

| Insulation monitoring & safety relay

Model Selection

Model	Voltage	Current	Power	Dimensions (W*D*H)	Weight
Normal					
D2000NG-100K-1200-300-EV	1200V	300A	100kW	850mm*1000mm*1500mm	530kg
D2000NG-200K-1200-600-EV	1200V	600A	200kW	850mm*1000mm*1500mm	700kg
D2000NG-300K-1200-900-EV	1200V	900A	300kW	850mm*1000mm*2000mm	885kg
D2000NG-400K-1200-1200-EV	1200V	1200A	400kW	1650mm*1000mm*2000mm	1300kg
D2000NG-500K-1200-1200-EV	1200V	1200A	500kW	1650mm*1000mm*2000mm	1630kg
Pro					
D2000PG-100K-1200-300-EV	1200V	300A	100kW	850mm*1000mm*1500mm	530kg
D2000PG-200K-1200-600-EV	1200V	600A	200kW	850mm*1000mm*1500mm	700kg
D2000PG-300K-1200-900-EV	1200V	900A	300kW	850mm*1000mm*2000mm	885kg
D2000PG-400K-1200-1200-EV	1200V	1200A	400kW	1650mm*1000mm*2000mm	1300kg
D2000PG-500K-1200-1200-EV	1200V	1200A	500kW	1650mm*1000mm*2000mm	1630kg
D2000PG-600K-1200-1200-EV	1200V	1200A	600kW	1650mm*1000mm*2000mm	1750kg
Ultra					
D2000UG-200K-1200-600-EV	1200V	600A	200kW	850mm*1000mm*1500mm	700kg
D2000UG-300K-1200-900-EV	1200V	900A	300kW	850mm*1000mm*2000mm	885kg
D2000UG-400K-1200-1200-EV	1200V	1200A	400kW	1650mm*1000mm*2000mm	1300kg
D2000UG-500K-1200-1200-EV	1200V	1200A	500kW	1650mm*1000mm*2000mm	1630kg
D2000UG-600K-1200-1200-EV	1200V	1200A	600kW	1650mm*1000mm*2000mm	1750kg

Normal	Pro	Ultra
Fundamental, Cost-effective	Fully-featured, Multi-scenario	Ultimate experience, Lab testing-oriented

Difference by Version	Normal	Pro	Ultra
Bidirectional DC power supply	★	★	★
Battery simulation	★	★	★
Manual switch	★	-	-
DC electronic load	-	★	★
Electrically operated switch	-	★	★

Note: "★" means Yes; "-" means not available.

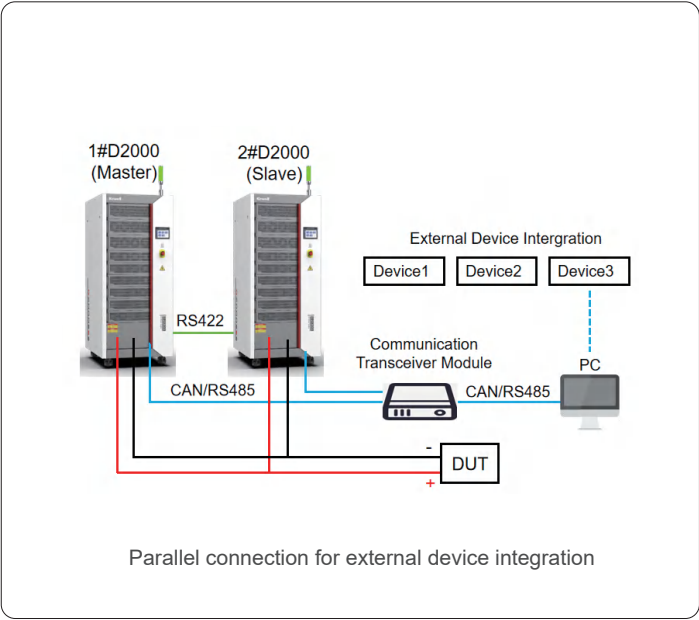
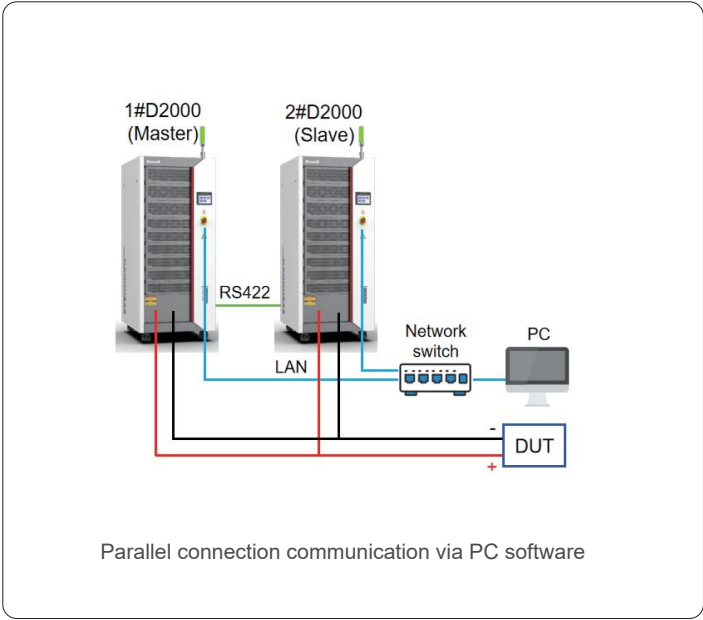
Product Applications

- | Testing EV motor controllers
- | Testing charging piles
- | Testing PCS
- | Testing UPS, EPS systems
- | Simulating/Replacing battery-powered testing environment
- | Simulating/Replacing high-power DC power supply and load testing environment

Product Functions

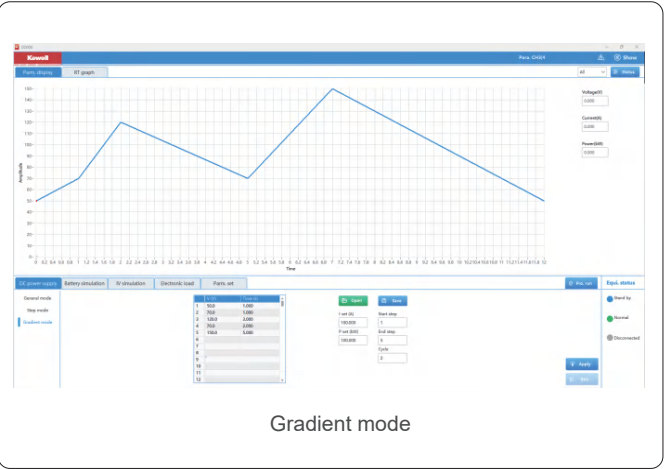
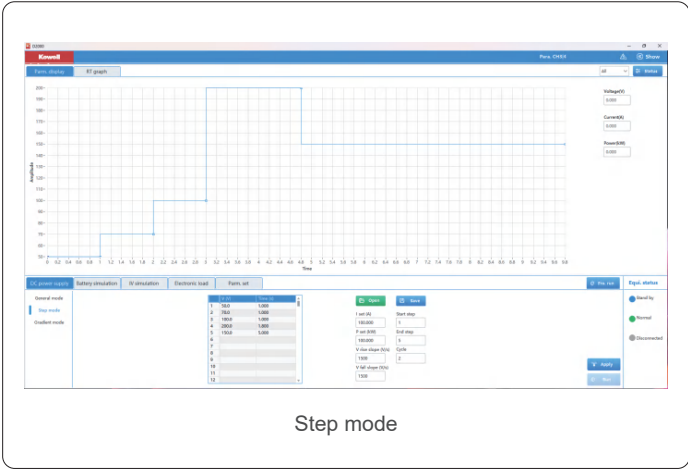
Flexible Parallel Connection:

The parallel connection uses the 422 communication interface, which has faster communication speed and better anti-interference performance.
In the case of parallel connection, one master can control multiple slaves.



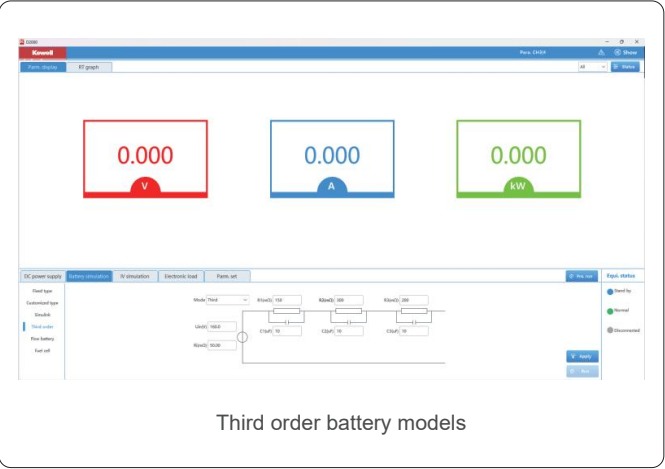
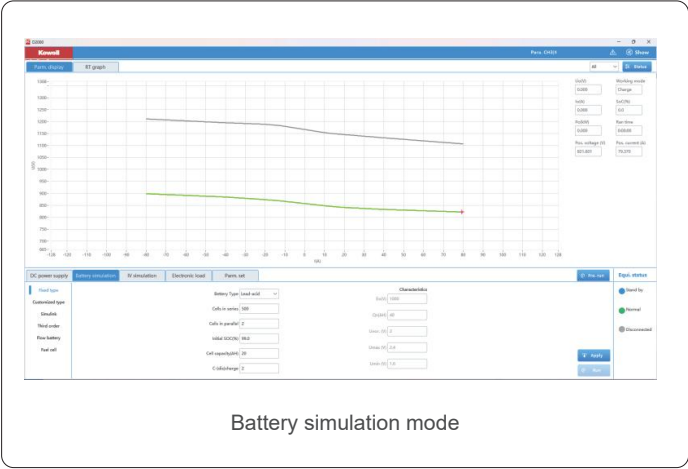
Programmable:

Users can program in Step mode and Gradient mode. D2000 allows for up to 200 programming steps and the steps can cycle up to 65535 times.
D2000 can memorize programming data, and it supports data import and export.



Battery Simulation:

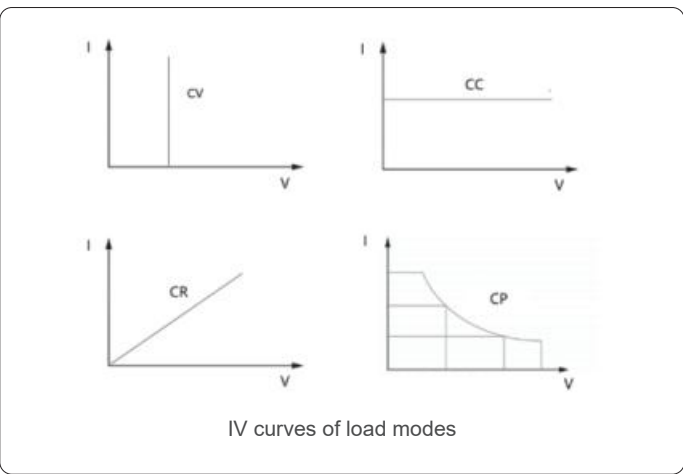
D2000 has built-in fixed battery models, user-defined battery models, and 1st/2nd/3rd order battery models.
D2000 can simulate the output of seven fixed types of batteries, including lithium manganese oxide, lithium cobalt oxide, lead-acid, lithium iron phosphate, nickel hydrogen, ternary lithium and lithium titanate batteries.
D2000 can analyze the relationship between R_i (T, Soc) and U_i (T, Soc), and supports importing battery cell model parameters to simulate the output characteristics of the corresponding battery pack.



D2000-EV SERIES BI-DIRECTIONAL PROGRAMMABLE DC POWER SUPPLY

● Electronic Load:

D2000-EV series has multiple output modes, such as CV/CC/CR/CP. Users can select the required load mode.



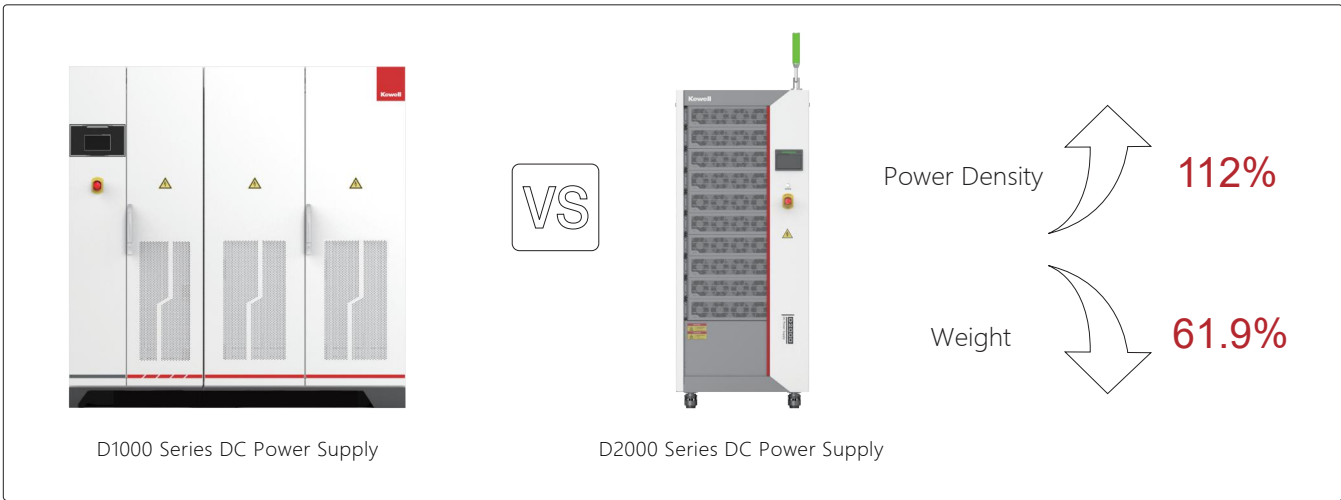
● New Design:

Easy replacement of faulty module Casters for easy move



● Ultra-High Power Density:

Up by 112% compared with industry frequency solutions
D2000-300kW cabinet weighs: 900kg. →down by 61.9% compared with industry frequency solutions



● Ultra-High Efficiency:

Power efficiency up to 95.5%, improved by 3.5% compared with the IGBT version.



Efficiency
95.5%



Test Duration
8H * 30D * 12M



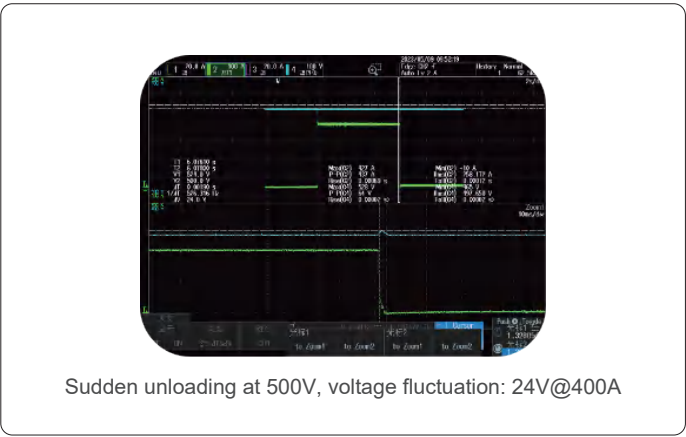
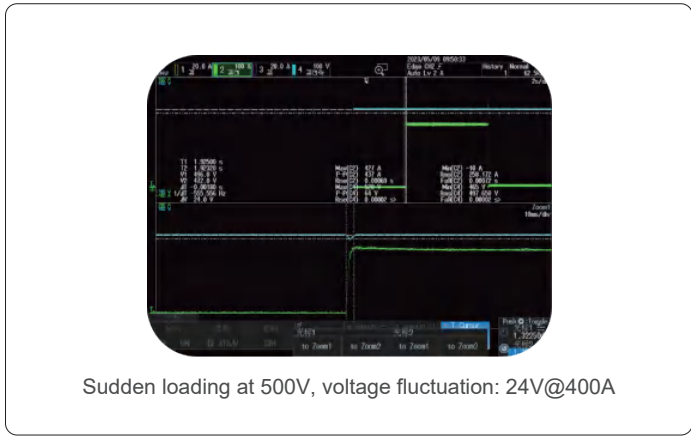
Reduce CO₂ Emissions by
30150kg

● Dynamic Performance:

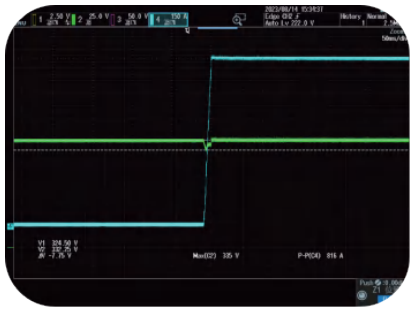
Voltage slew rate $\geq 300\text{V/ms}$.



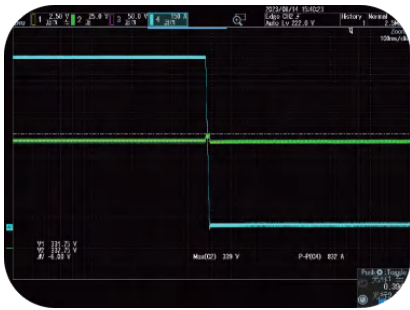
High dynamic performance of DC voltage output.



D2000-EV SERIES BI-DIRECTIONAL PROGRAMMABLE DC POWER SUPPLY



Current: 0-90%I@10ms, voltage drop < 10



Current: 90%-0I@10ms, voltage overshoot < 10V

D2000-EV Options

Name	Model	Description
Switching Resistor	PA1070-SR-T0	18Ω
	PA1070-SR-T1	9Ω
	PA1070-SR-T2	7.2Ω
	PA1070-SR-T3	3.6Ω
	PA1070-SR-T4	2.4Ω
Computer & Accessories	PA1070-PC-T0	i5 processor, 16GB memory, 1T SSD + win10 + 23.8-inch monitor (with mouse and keyboard)
Three-color Alarm Lamp	PA1070-AL-T3	Three-color alarm lamp
Cables for Parallel Connection	PA1070-PO-T0	Parallel connection kit for 2 devices (including 1*2m 422# communication cable, 2*5m network cables, 1*2m network cable, and switch)
	PA1070-PO-T1	Parallel connection kit for 2 devices (including 1*2m 422# communication cable, 2*10m network cables, 1*2m network cable, and switch)

Standard Accessories

1 set of DC power supply, 1 copy of inspection report, 1 * USB stick (32G), 1 * Ethernet cable (10m).

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<https://idm-instrumentos.es>

Septiembre 31
T. 34 91 300 0191

BI-DIRECTIONAL PROGRAMMABLE DC POWER SUPPLY

D2000-IV SERIES



Adopting the new modular design, Kewell has launched the second-generation bi-directional programmable high-power DC power supply, D2000-IV series. The D2000-IV series features the third-generation SiC design, boasting high precision, high power density, high dynamic response, and high efficiency. D2000-IV supports DC source mode, IV simulation, regenerative electronic load, and battery simulation function.

Features

- | Third-generation SiC design

| Bi-directional DC power supply

| Regenerative electronic load

| Electrically operated switch + TFT touch screen

| Multi-step programming

| Voltage output range: 12~2000V

| Current output range: 0~900A

| Efficiency: up to 95.5%
- | CV/CC/CR/CP in load mode

| 7 fixed battery types for battery simulation

| 1st/2nd/3rd order battery models

| IV curve simulation, SAS, Sandia

| Dynamic MPPT (EN50530)

| Parallel connection to as high as 2.4MW

| Maximum power density: 176kW/m3

| Comm. interface: RS485, LAN, and CAN

| Insulation monitoring & safety relay

Model Selection

Model	Voltage	Current	Power	Dimensions (W*D*H)	Weight
Normal					
D2000NG-100-2000-150-IV	20-2000V	150A	100kW	850mm*1000mm*1500mm	530kg
D2000NG-200-2000-300-IV	20-2000V	300A	200kW	850mm*1000mm*1500mm	700kg
D2000NG-300-2000-450-IV	20-2000V	450A	300kW	850mm*1000mm*2000mm	900kg
D2000NG-400-2000-600-IV	20-2000V	600A	400kW	1650mm*1000mm*2000mm	1460kg
D2000NG-500-2000-750-IV	20-2000V	750A	500kW	1650mm*1000mm*2000mm	1630kg
Pro					
D2000PG-100-1200-300-IV	12-1200V	300A	100kW	640mm*900mm*1600mm	505kg
D2000PG-200-1200-450-IV	12-1200V	450A	200kW	640mm*900mm*1600mm	505kg
D2000PG-100-2000-150-IV	20-2000V	150A	100kW	850mm*1000mm*1500mm	530kg
D2000PG-200-2000-300-IV	20-2000V	300A	200kW	850mm*1000mm*1500mm	700kg
D2000PG-300-2000-450-IV	20-2000V	450A	300kW	850mm*1000mm*2000mm	900kg
D2000PG-400-2000-600-IV	20-2000V	600A	400kW	1650mm*1000mm*2000mm	1460kg
D2000PG-500-2000-750-IV	20-2000V	750A	500kW	1650mm*1000mm*2000mm	1630kg
D2000PG-600-2000-900-IV	20-2000V	900A	600kW	1650mm*1000mm*2000mm	1800kg
Ultra					
D2000UG-100-2000-150-IV	20-2000V	150A	100kW	850mm*1000mm*1500mm	530kg
D2000UG-200-2000-300-IV	20-2000V	300A	200kW	850mm*1000mm*1500mm	700kg
D2000UG-300-2000-450-IV	20-2000V	450A	300kW	850mm*1000mm*2000mm	900kg
D2000UG-400-2000-600-IV	20-2000V	600A	400kW	1650mm*1000mm*2000mm	1460kg
D2000UG-500-2000-750-IV	20-2000V	750A	500kW	1650mm*1000mm*2000mm	1630kg
D2000UG-600-2000-900-IV	20-2000V	900A	600kW	1650mm*1000mm*2000mm	1800kg

Normal	Pro	Ultra
Fundamental, Cost-effective	Fully-featured, Multi-scenario	Ultimate experience, Lab testing-oriented

Differences by Version	Normal	Pro	Ultra
Bi-directional DC power supply	★	★	★
IV simulation	★	★	★
Battery simulation	★	★	★
Manual switch	★	-	-
DC electronic load	-	★	★
Electrically operated switch	-	★	★

Note: "★" means Yes; "-" means not available.

Product Applications

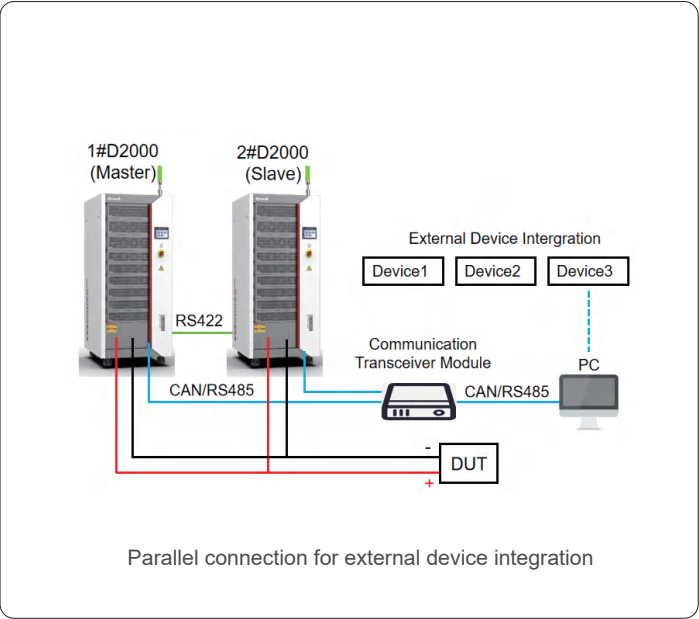
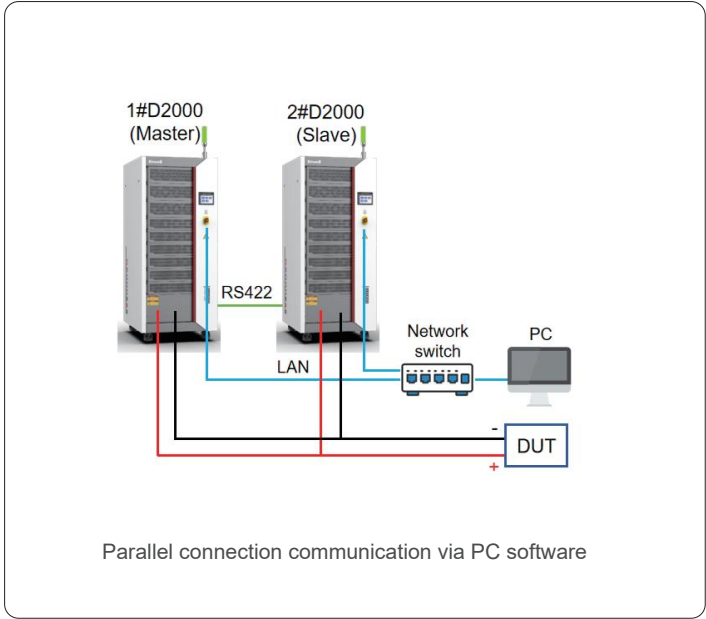
- Testing grid-connected PV inverters
- Testing EV motor controllers
- Testing charging piles
- Testing PCS
- Testing UPS, EPS systems
- Simulating/Replacing battery-powered testing environment
- Simulating/Replacing high-power DC power supply and load testing environment

Product Functions

Flexible Parallel Connection:

The parallel connection uses the 422 communication interface, which has faster communication speed and better anti-interference performance.

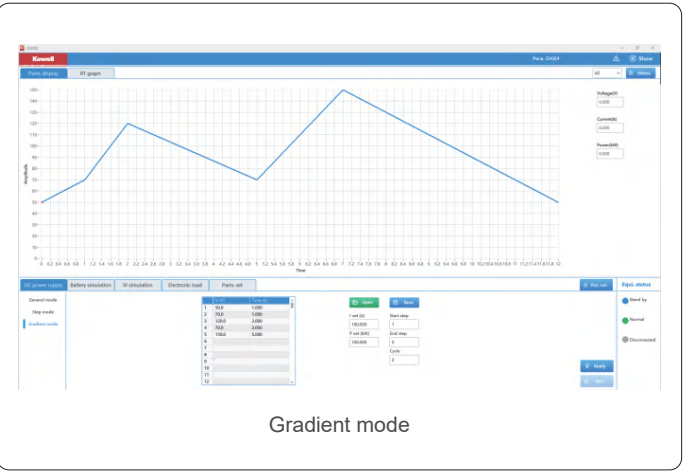
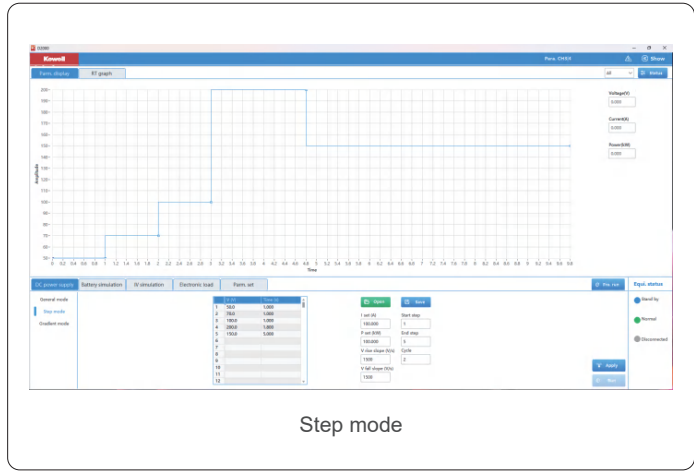
In the case of parallel connection, one master can control multiple slaves.



Programmable:

Users can program in Step mode and Gradient mode. D2000 allows for up to 200 programming steps and the steps can cycle up to 65535 times.

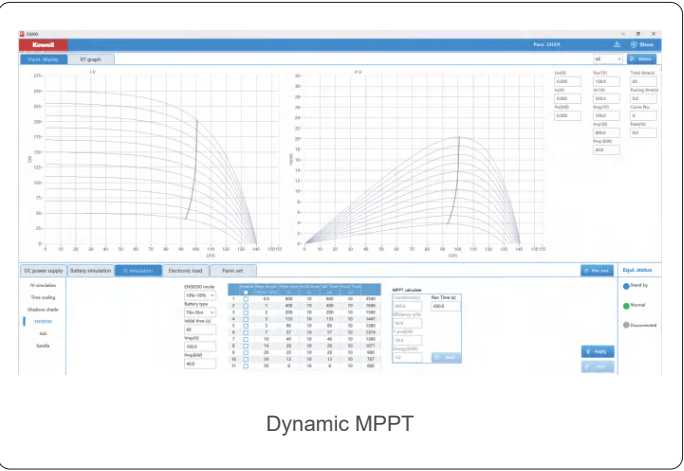
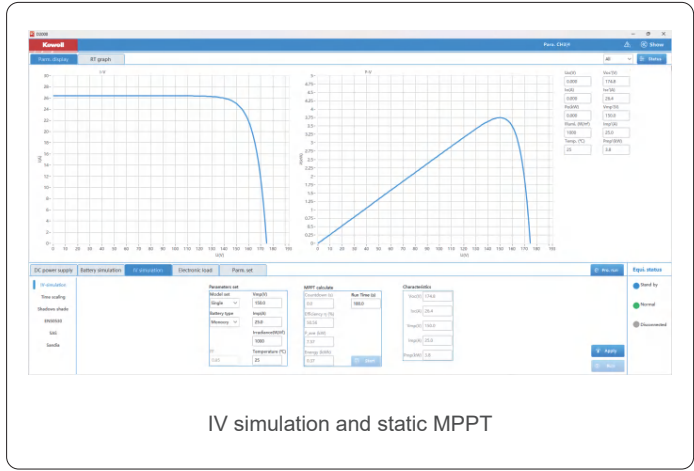
D2000 can memorize programming data, and it supports data import and export.



IV Simulation:

D2000 can simulate the corresponding characteristics of monocrystalline, polycrystalline, and thin film solar panels, and the output of solar panels on sunny days, cloudy days, rainy days, etc.

D2000 supports static MPPT test, simulating a single output characteristic of solar cells; or dynamic MPPT test, simulating multiple output characteristics of solar cells.



D2000-IV SERIES BI-DIRECTIONAL PROGRAMMABLE DC POWER SUPPLY

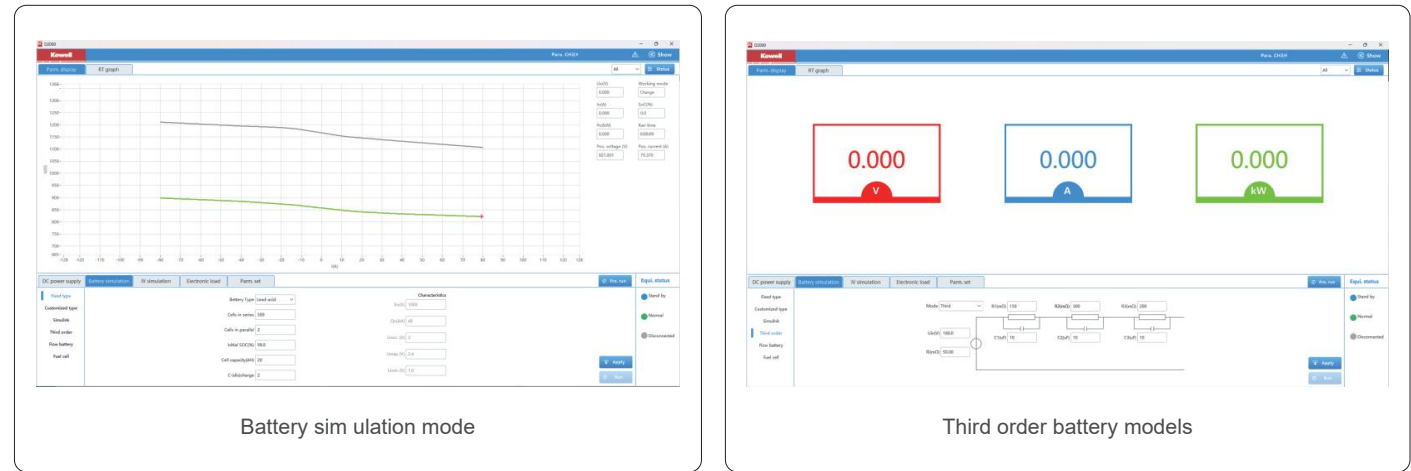
Battery Simulation:

D2000 has built-in fixed battery models, user-defined battery models, and 1st/2nd/3rd order battery models.

D2000 can simulate the output of seven fixed types of batteries, including lithium manganese oxide, lithium cobalt oxide, lead-acid, lithium iron phosphate, nickel hydrogen, ternary lithium and lithium titanate batteries.

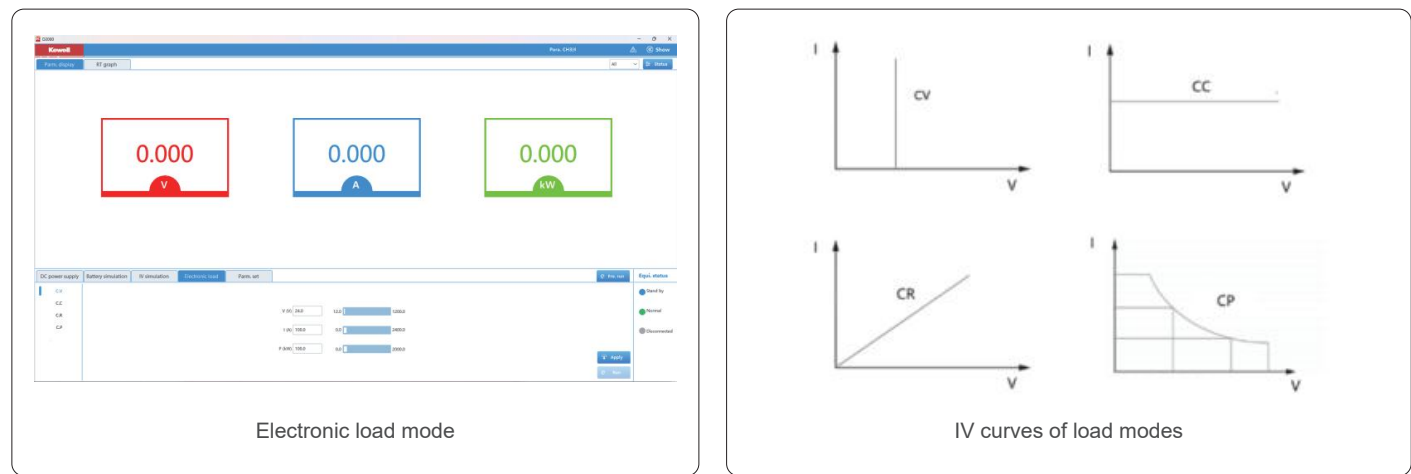
D2000 can analyze the relationship between R_i (T, Soc) and U_i (T, Soc), and it supports importing battery cell model parameters to simulate the output characteristics of the corresponding battery pack.

Users can define the 1st/2nd/3rd order battery models.



Electronic Load:

D2000-IV series has multiple output modes, such as CV/CC/CR/CP. Users can select the required load mode.



Product Highlights

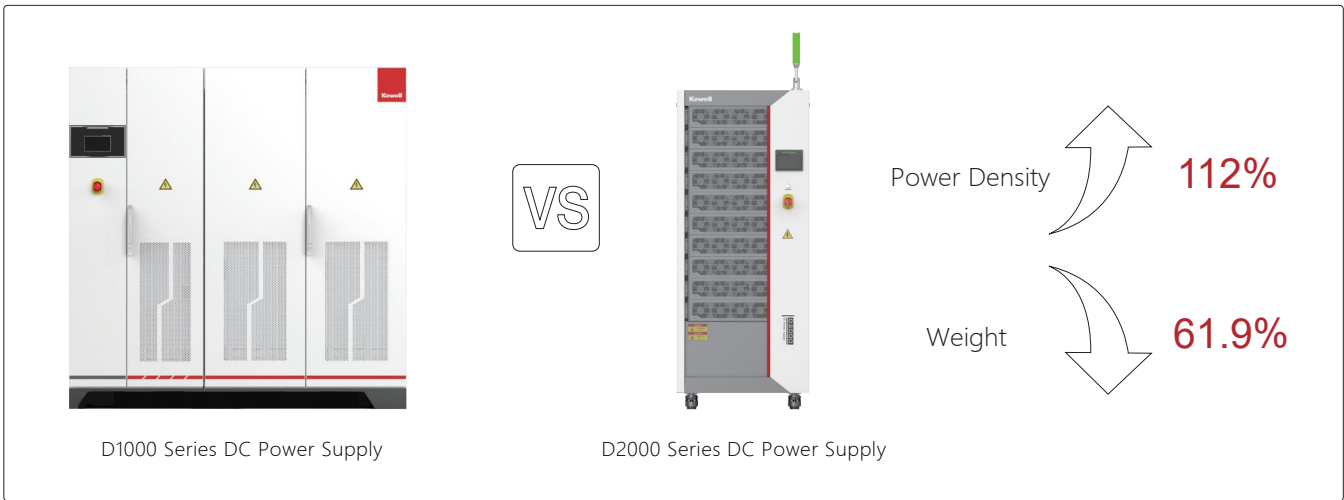
New Design:

Easy replacement of faulty module
Casters for easy move



Ultra-High Power Density:

Up by 112% compared with industry frequency solutions
D2000-300kW cabinet weighs: 900kg. →down by 61.9% compared with industry frequency solutions



Ultra-High Efficiency:

Power efficiency up to 95.5%, improved by 3.5% compared with the IGBT version.



Efficiency
95.5%



Test Duration
8H * 30D * 12M



Reduce CO₂ Emissions by
30150kg

Dynamic Performance:

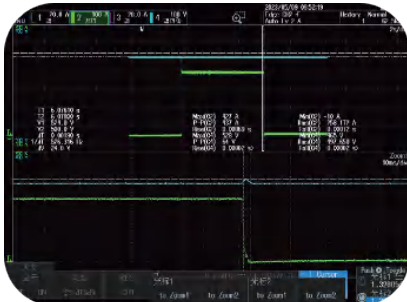
Voltage slew rate $\geq 300\text{V/ms}$.



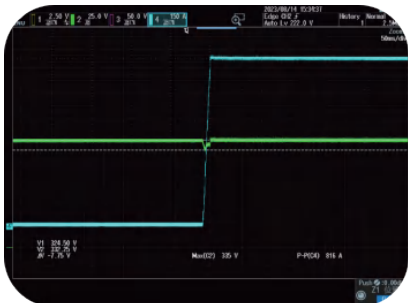
High dynamic performance of DC voltage output.



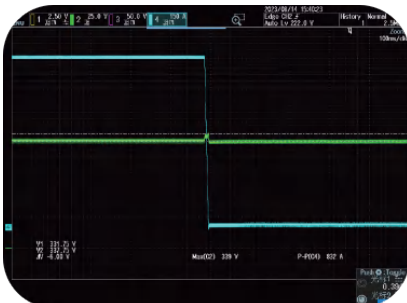
Sudden loading at 500V, voltage fluctuation: 24V@400A



Sudden unloading at 500V, voltage fluctuation: 24V@400A



Current: 0-90%I@10ms, voltage drop < 10



Current: 90%-0I@10ms, voltage overshoot < 10V

D2000-IV Options

Name	Model	Description
Computer & Accessories	PA1070-PC-T0	i5 processor, 16GB memory, 1T SSD + win10 + 23.8-inch monitor (with mouse and keyboard)
Three-color Alarm Lamp	PA1070-AL-T3	Three-color alarm lamp
Cables for Parallel Connection	PA1070-PO-T0	Parallel connection kit for 2 devices (including 1*2m 422# communication cable, 2*5m network cables, 1*2m network cable, and switch)
	PA1070-PO-T1	Parallel connection kit for 2 devices (including 1*2m 422# communication cable, 2*10m network cables, 1*2m network cable, and switch)

Standard Accessories

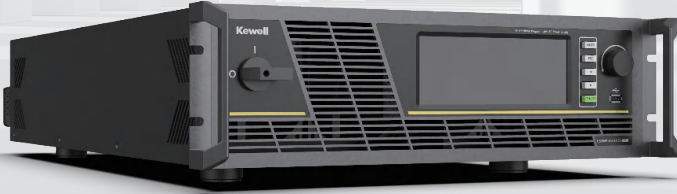
1 set of DC power supply, 1 copy of inspection report, 1 * USB stick (32G), 1 * Ethernet cable (10m).



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BI-DIRECTIONAL PROGRAMMABLE
AC POWER SUPPLY

G6000 SERIES



The G6000P series is a four-quadrant AC power supply featuring high precision, high power density, and high dynamic performance. As a source, it supports adjustment of three phases separately, while having LIST/PLUSE/STEP and other programming functions to simulate the disturbance characteristics of grid voltage and frequency. It also has waveform editing, harmonic and inter-harmonic modes, able to simulate abnormal grid conditions and test the grid tolerance of the device under test (DUT). As a load, it has built-in AC load models to simulate different load characteristics.

Features

- Automatic switching of the source-load function

AC electronic load

AC power output range: 0 ~ 18kVA

AC current output range: 0 ~ 90A

AC voltage output range: 0 ~ 450V (L-N)

Maximum DC voltage output: 650V

Parallel connection : up to 6 units
- Single phase or three-phase output

Able to simulate instantaneous grid interruption of 1ms

Built-in waveforms: triangle, square, clipped sine, trapezoid, and sawtooth.

Harmonics and inter-harmonics superposition

Harmonics analyzer

Communication interfaces: RS232/LAN/USB/CAN/Digital IO/Analog IO

Protections: OVP, OCP, OPP

Model Selection

Model	Voltage	Current	Power	Resolution	Accuracy	Size
Pro						
G6000PG-18K-0450-0090	450V	90A	18kVA	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
Ultra						
G6000UG-18K-0450-0090	450V	90A	18kVA	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U

Normal
Fundamental,
Cost-effective

Pro
Fully-featured,
Multi-scenario

Ultra
Ultimate experience,
Lab testing-oriented

Version	Normal	Pro	Ultra
Features			
Four-quadrant	-	★	★
Unidirectional	★	-	-
AC	★	★	★
DC	-	★	★
AC+DC	-	★	★
List/Pulse/Step	★	★	★
Waveform editing	-	★	★
Harmonic mode	-	★	★
Inter-harmonic mode	-	★	★
Harmonic display	-	★	★
AC load	-	-	★

Note: "★" means Yes; "-" means not available.

Product Applications

- |

 Simulating the voltage change in grid
- |

 Simulating the frequency change in grid
- |

 Simulating grid anomalies
- |

 LVRT/HVRT test
- |

 Testing PV energy storage
- |

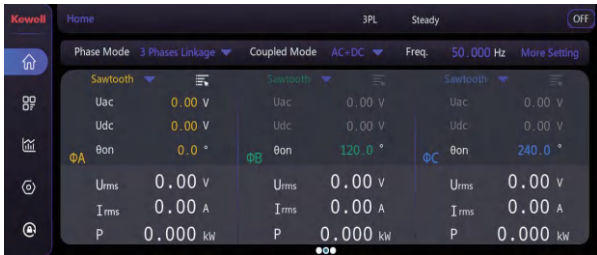
 Testing on-board chargers
- |

 Simulating/Replacing AC power supply and load testing environment

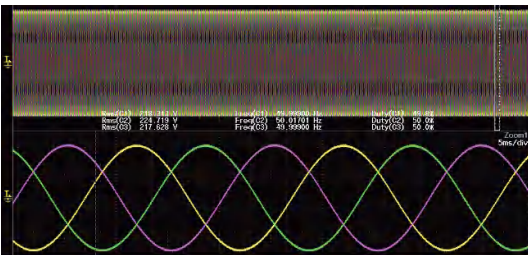
Product Functions

Sine Wave Mode

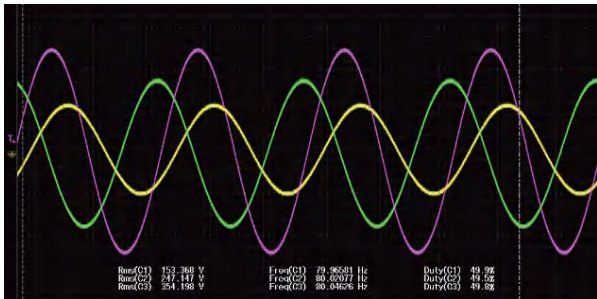
Users can set the voltage, phase, amplitude, and frequency of the output, minimum step size: 0.01V, 0.01Hz; the output mode can be three-phase linkage/three-phase independent/single phase.



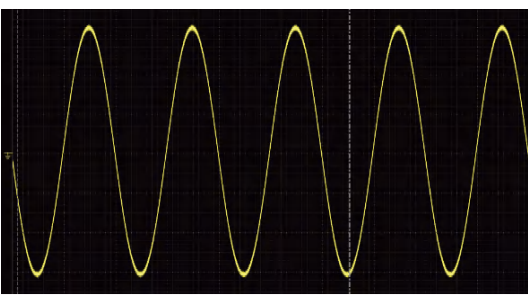
Sine wave mode



Three-phase linkage @220V, phase difference: 120°



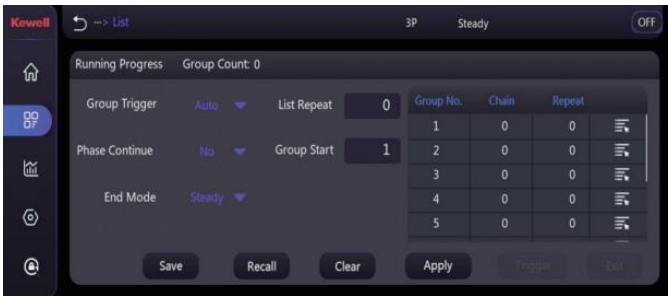
Three-phase independent @different amplitude
Phase A: 60°, Phase B: 200°, Phase C: 100°



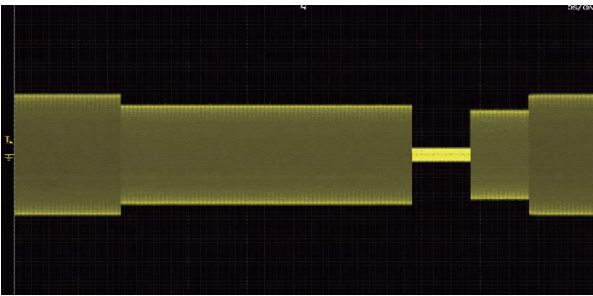
Single phase @220V

LIST/STEP/PULSE Mode

The G6000 series has multiple programming output modes such as LIST, STEP and PULSE. LIST mode supports editing of more complex test waveforms, with up to 10 groups of steps, each group having up to 20 sequences to be set. The steps can be set in cycle.



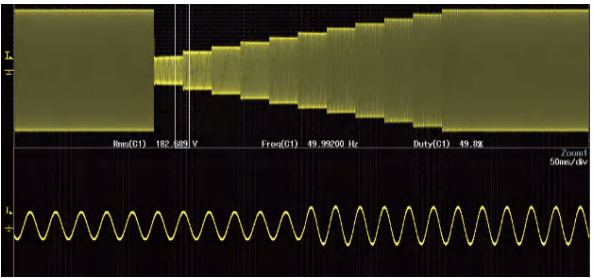
LIST mode



LIST mode @voltage: 220-180-20-160V step change



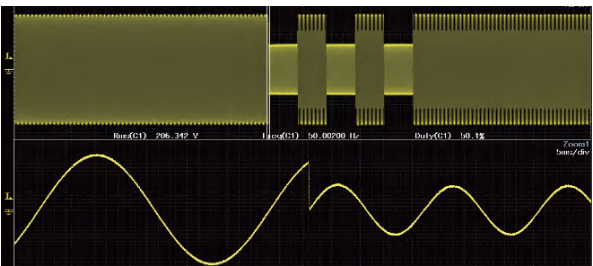
STEP mode



STEP mode @voltage: 50-220V, frequency: 45-65Hz,
gradient change in 10s



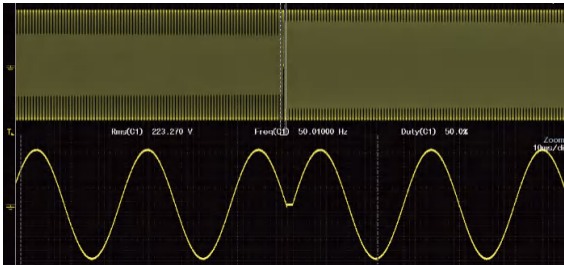
PULSE mode



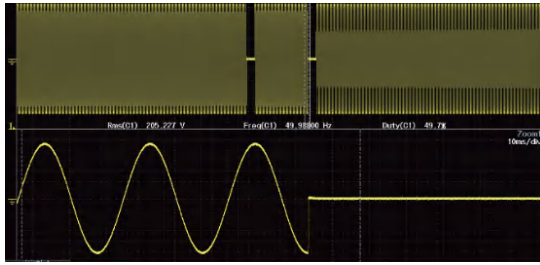
PULSE mode @total cycle of 1s, pulse time: 50%,
pulse voltage: 100V, frequency: 100Hz

G6000 SERIES BI-DIRECTIONAL PROGRAMMABLE AC POWER SUPPLY

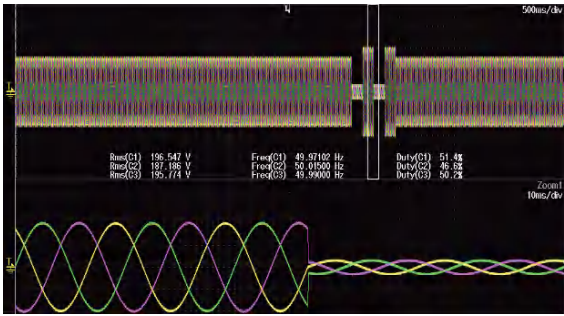
Users can also select high voltage ride through (HVRT), low voltage ride through (LVRT), and high and low voltage ride through combined test functions. The G6000 series supports single-phase, two-phase and three-phase ride through tests.



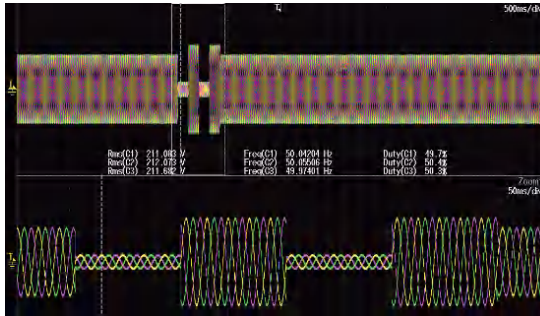
Voltage: 220V, ZVRT duration: 1ms, phase A drop phase angle: 180°



Voltage: 220V, phase A drop phase angle: 270° (ZVRT)



Nominal voltage: 220V, LVRT: 20%, HVRT: 130%, phase A drop phase angle: 0°

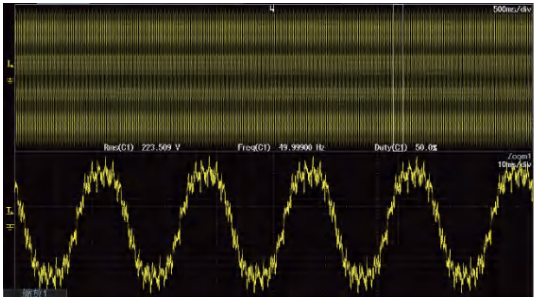


Harmonic & Inter-harmonic Mode

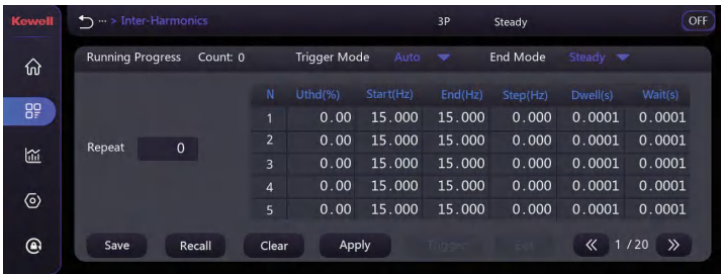
In harmonic superposition mode, users can set the harmonic amplitude of each voltage component to simulate abnormal grid environment and thereby test the grid withstand of the DUT. (2nd-100th harmonic superimposition, up to 99 kinds of harmonics to be superimposed simultaneously)



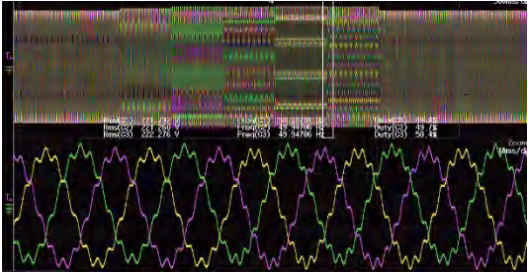
Harmonic mode



Fundamental wave @50Hz, 2nd-100th harmonics with a content of 5%-10%



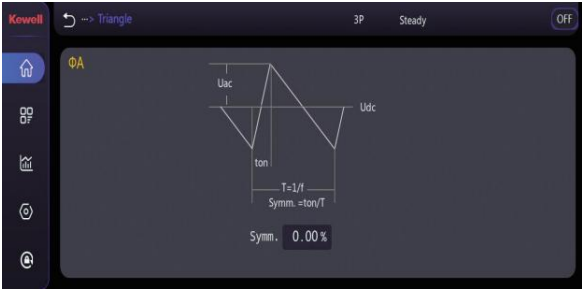
Inter-harmonic mode



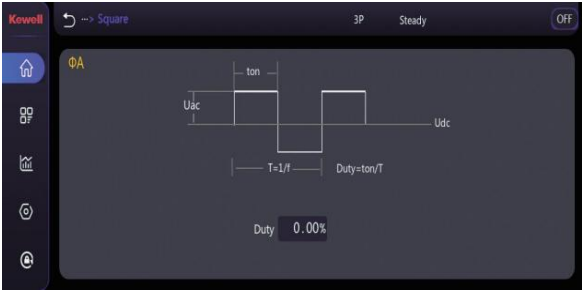
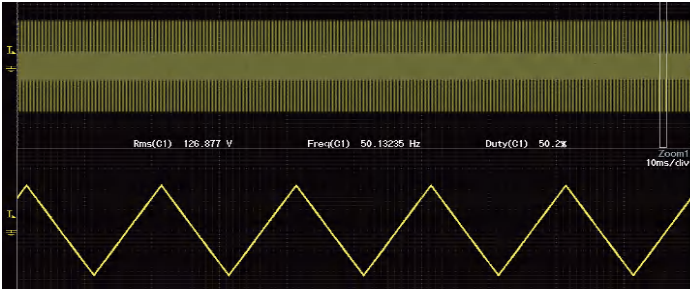
Inter-harmonic content: 10%, frequency start @200Hz, end @600Hz

Special Waves Mode

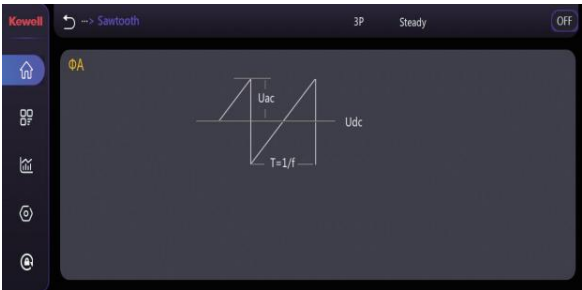
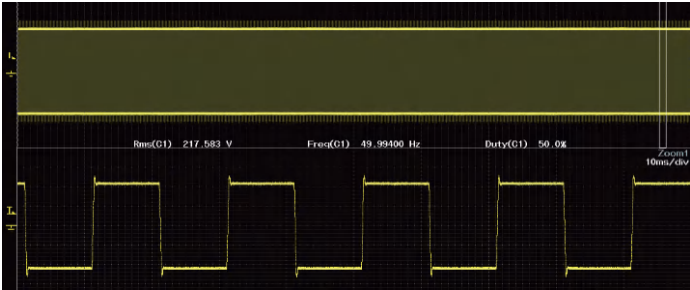
The G6000 series has different types of built-in waveforms including triangle, square, clipped sine wave, trapezoid, and sawtooth. Users may call a selected waveform via the software or the menu and display it on the LCD screen.



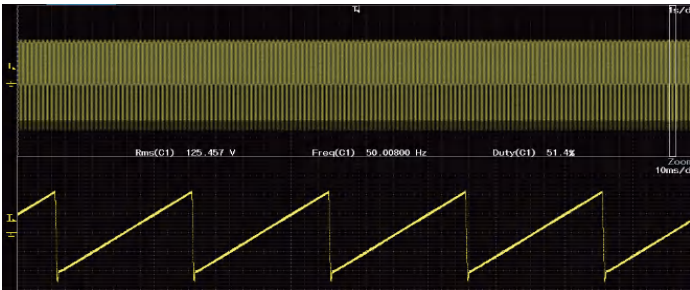
Triangle wave @phase A-220V, 50% symmetry



Square wave @phase A-220V, 50% duty cycle

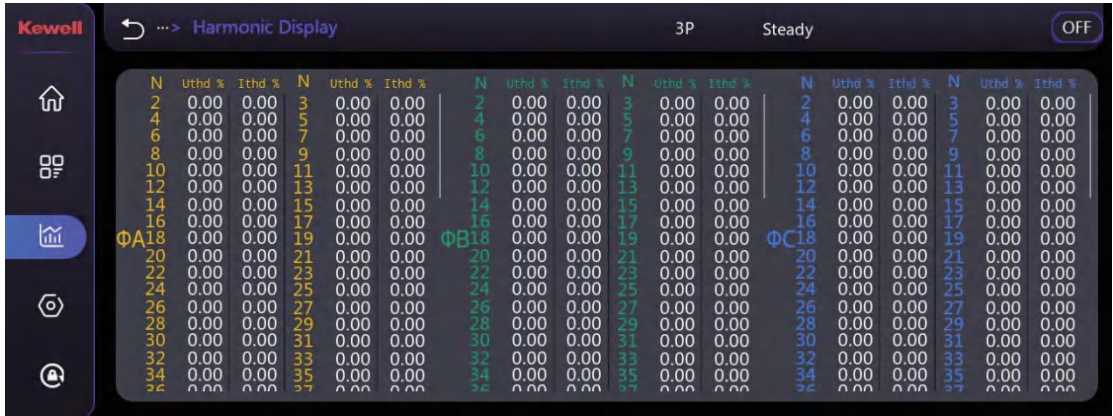


Sawtooth @phase A-220V



Harmonic Display

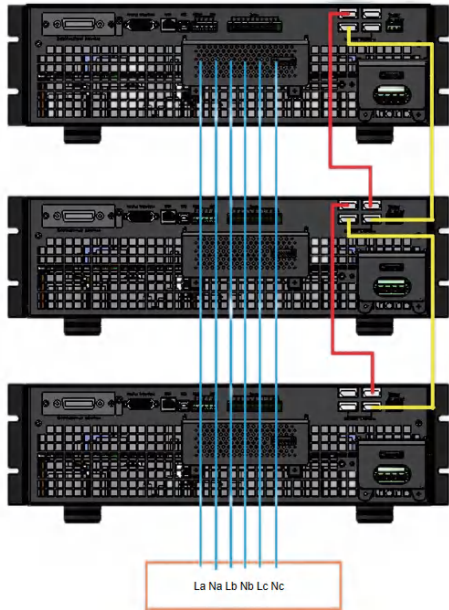
The G6000 series features harmonic analysis function that covers voltage harmonic measurements and current harmonic measurements. In harmonic mode, it tests voltage and current THD and the phase difference between harmonics and fundamental wave. In addition, it supports multiple harmonic measurements and display of the results in a list in an intuitive way.



Harmonic display

Parallel Connection

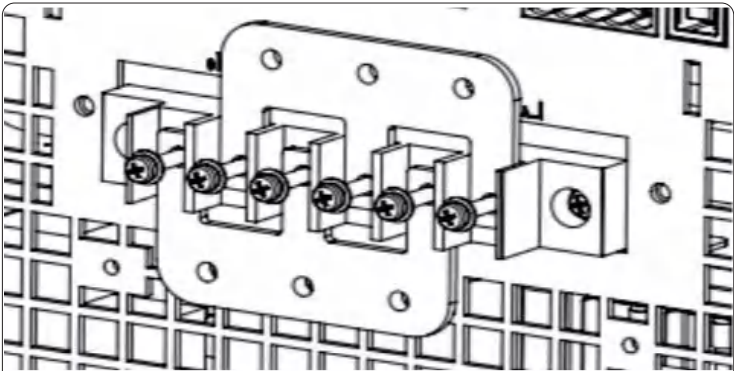
Parallel connection of multiple G6000 series units provides higher current and larger power output.



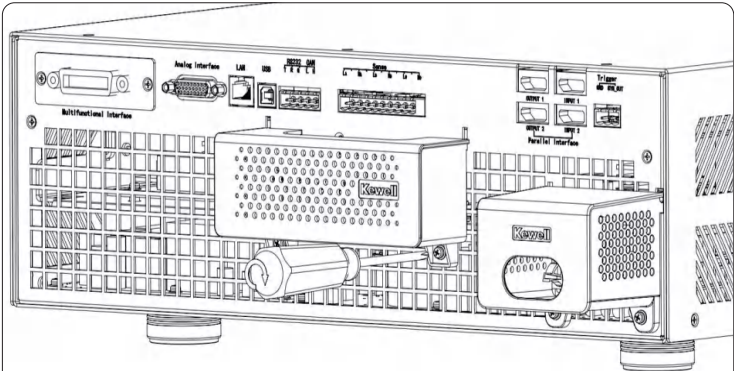
The G6000 series devices in parallel connection

Standard Accessories

1 set of AC power supply, 1 set of handles, 1 * USB stick (32G), 1 * Ethernet cable (3m), 1 * AC input protective cover, 1 * AC output protective cover, 2 * parallel connection cable, 2 * short-circuiting copper busbar



Copper busbar for short-circuiting



AC protective covers

PROGRAMMABLE DC ELECTRONIC LOAD

E5000 SERIES



E5000 Series is a compact, high-power DC electronic load featuring wide operating range and high dynamic frequency. In 4U size, it powers up to 6.6kW and outputs voltage up to 1200V. It supports at most 10 E5000 devices in parallel operation.

Features

- | High power density: 6.6kW in 4U

| Power output range: 6.6kW

| Voltage output range: 0 ~ 150V, 0 ~ 600V, 0 ~ 1200V

| A variety of modes: CC, CV, CR, CP, CCD, and CRD

| Three voltage levels + three current ranges

| Automatic GO/NG detection

| Remote voltage compensation
- | Dynamic current/resistance load of 25kHz

| Analysis of fuel cell impedance

| RS485/CAN/LAN/USB communication

| Optional GPIB

| Protections: OVP, OCP, OTP, OPP, etc.

| Dynamic frequency of 50kHz

| Up to 255 groups of programmable sequences

Model Selection

Model	Voltage	Current	Power	Resolution	Accuracy	Size
Normal						
E5000NG-6K6-0150-0600	150V	600A	6.6kW	0.001V/0.005A/0.1W	≤0.075%F.S./≤0.2% F.S.	4U
E5000NG-13K2-0150-1200	150V	1200A	13.2kW	0.001V/0.01A/0.2W	≤0.075%F.S./≤0.2% F.S.	7U
E5000NG-19K8-0150-1800	150V	1800A	19.8kW	0.001V/0.02A/0.4W	≤0.075%F.S./≤0.2% F.S.	10U
E5000NG-6K6-1200-0240	1200V	240A	6.6kW	0.005V/0.002A/0.1W	≤0.075%F.S./≤0.2% F.S.	4U
Pro						
E5000PG-6K6-0150-0600	150V	600A	6.6kW	0.001V/0.005A/0.1W	≤0.075%F.S./≤0.2% F.S.	4U
E5000PG-13K2-0150-1200	150V	1200A	13.2kW	0.001V/0.01A/0.2W	≤0.075%F.S./≤0.2% F.S.	7U
E5000PG-19K8-0150-1800	150V	1800A	19.8kW	0.001V/0.02A/0.4W	≤0.075%F.S./≤0.2% F.S.	10U
E5000PG-6K6-1200-0240	1200V	240A	6.6kW	0.005V/0.002A/0.1W	≤0.075%F.S./≤0.2% F.S.	4U

Note: E5000 series will launch 4U for 2.2kW, 4.4kW; 29U for 26.4kW, 33kW, 39.6kW; and 42U for 46.2kW, 52.8kW, 59.4kW gradually.

- Normal
Fundamental, Cost-effective
- Pro
Fully-featured, Multi-scenario

Version	Normal	Pro
Features		
Basic mode (CC/CV/CR/CP/CCD)	★	★
Battery discharge	★	★
Short-circuit simulation	★	★
LIST mode	★	★
Dynamic resistance load (CRD)	-	★
Composite modes (CVCC/CRCC/CVCR/AUTO)	-	★
Sine wave mode (SWD)	-	★
Dynamic load sweep (SWP)	-	★
OCP/OPP threshold setting	-	★

Note: "★" means Yes; "-" means not available.

Product Applications

- | Battery discharge test

| Fuel cell test

| Testing DC charging modules

| Testing on-board chargers

| Testing DC charging piles
- | Testing DCDC converters

| Power semiconductor devices

| Military industry, avionics

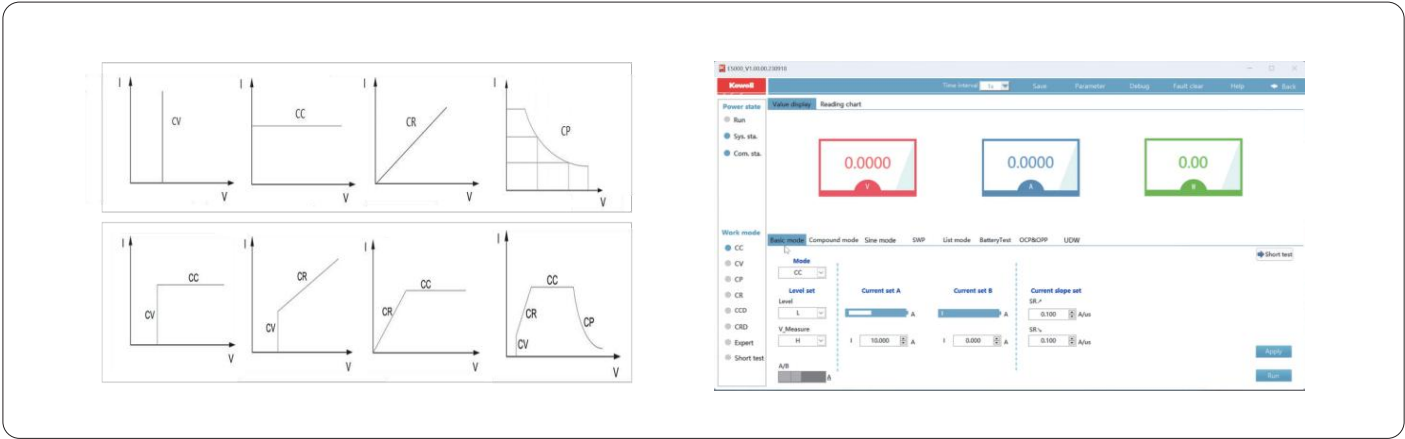
| High voltage contactors

| Testing UPS, SMPS systems

Product Functions

DC Electronic Load

The E5000 series supports a variety of operation modes meeting a wide range of test requirements. These include basic operation modes: CC, CV, CP and CR and combined modes: CV+CC, CV+CR, CC+CR, and CV+CC+CP+CR (AUTO).



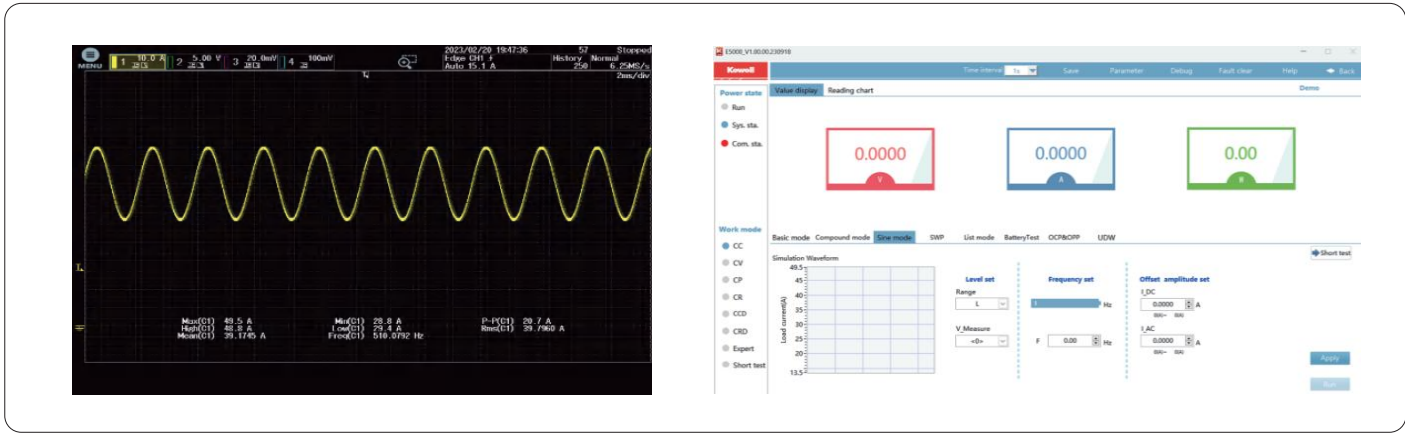
Dynamic Load

The E5000 series supports high-speed, programmable dynamic load mode (dynamic current load CCD and dynamic resistance load CRD), frequency sweep mode, etc. Users can also set high/low level of current, T1/T2, rise/fall slew rate and number of executions. In cases of continuous changes in load current, the internal monitoring mechanism and circuits are able to minimize current waveform distortion; the minimum current rise time of the load at 150V is 15μs, with dynamic change up to 25kHz.



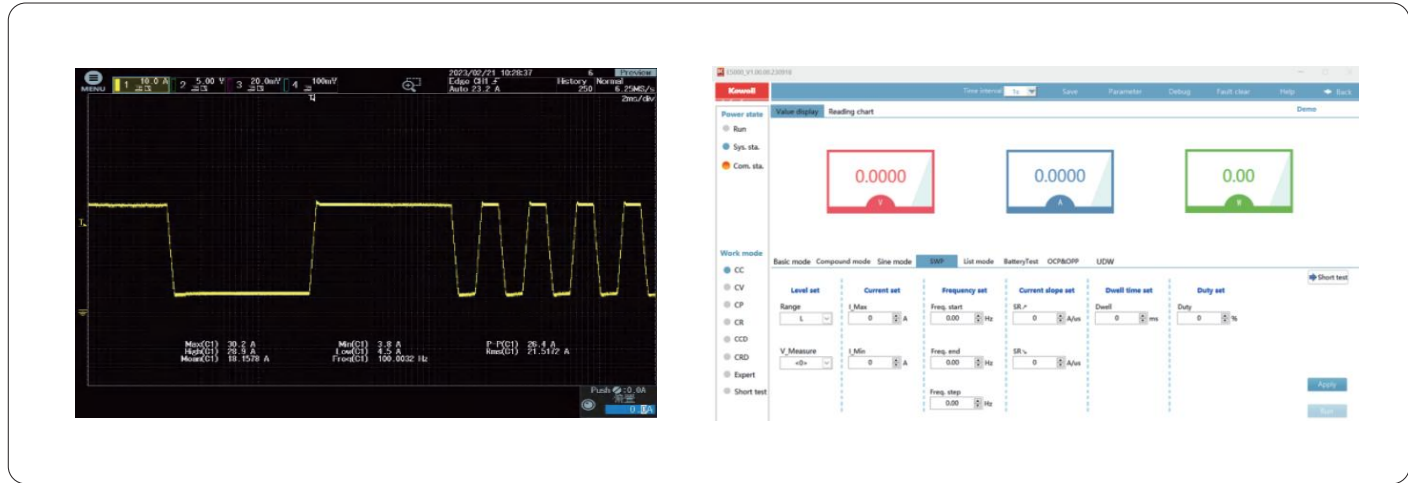
Sine Wave Dynamic

The E5000 series is equipped with SWD function, where output current bias (I@DC), sine wave (I@AC) and sinusoidal frequency can be set. The sinusoidal frequency can be set up to 20kHz.



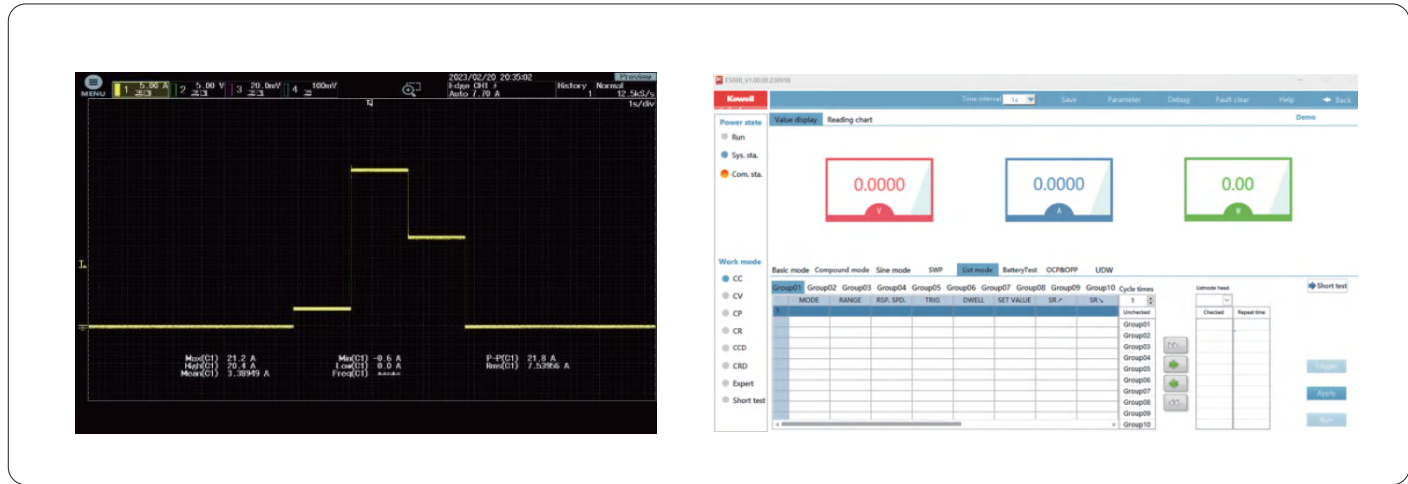
Dynamic Load Sweep

It supports linearly varying the frequency of the load current to as high as 50kHz. This mode tests the maximum/minimum voltage peak of the DUT under worst-case conditions. This dynamic frequency sweep function has a sampling rate of 500kHz. Dynamic load sweep mode can simulate a variety of load conditions, which meets the needs of most customers.



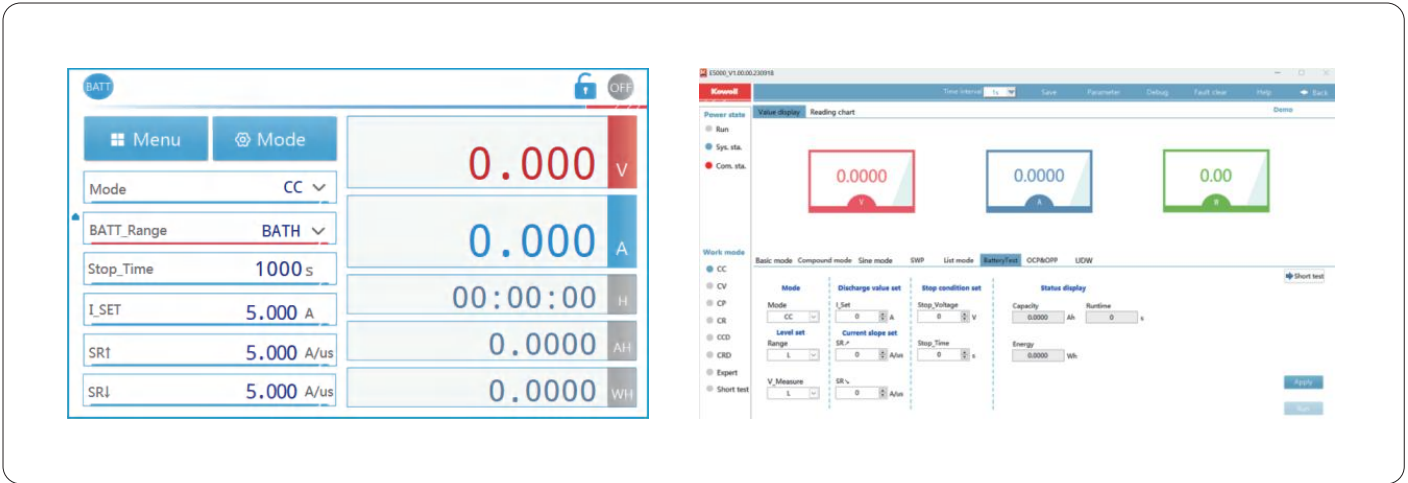
LIST Function

The E5000 series also has an output mode that supports multi-step programming, with up to 10 test files to be edited, each containing 200 sequences. The time of a single step ranges 0.1ms~30s. In this mode, the temporal changes of load under CC/CV/CP/CR conditions are simulated. It also supports nested loops, and step cycle up to 65535 times.



Battery Test Mode

This mode features battery discharge function and supports discharge test under constant current/ constant resistance/ constant power conditions. Users may set discharge cut-off conditions including cut-off voltage and discharge time, and the discharge will stop when either one is reached. Battery voltage, time and discharge capacity can be observed during the test.



Determination of OCP/OPP Points

The E5000 electronic load provides customer-defined overcurrent/overpower protection function to avoid damage to the DUT caused by mis-operation. Users may define current protection threshold as needed for different DUTs.



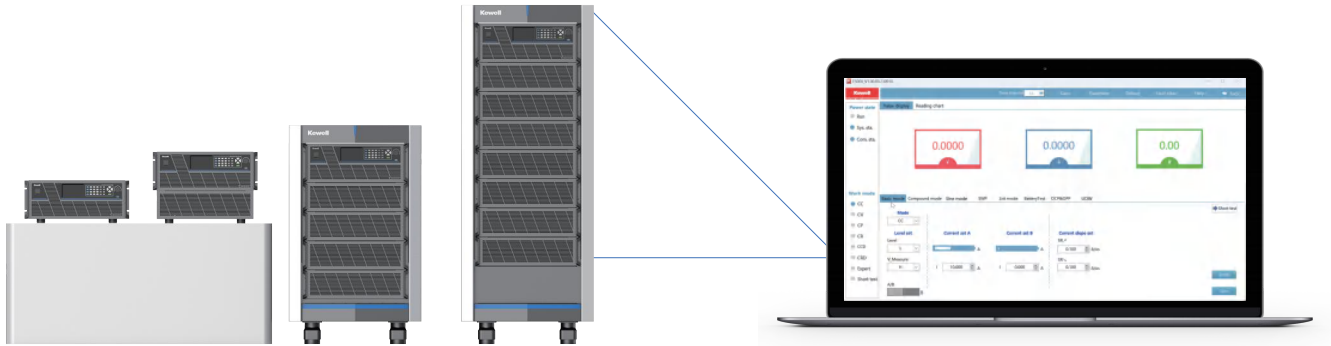
Product Highlights

Ultra-High Power Density



Up to 4U/6.6kW per device, compact, lightweight, and space-efficient

Flexible Paralleling



E5000 can output 6.6kw in 4U size. An integrated cabinet of 42U can output 59.4kw at max. It supports flexible parallel connection of at most 9 devices.

Super Dynamic Performance

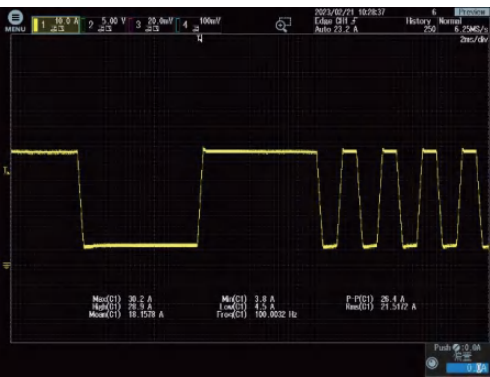
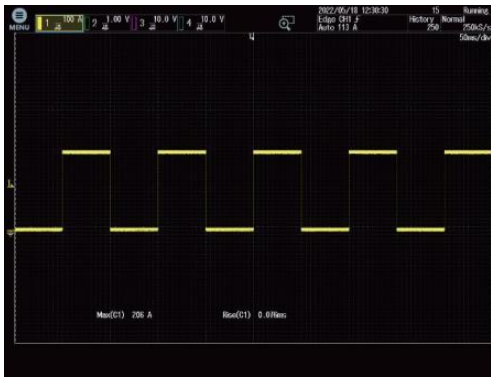
- Current slope up to 6V/μs

The minimum current rise time of load at 150V is 15μs, with dynamic change up to 25kHz



- Rapid dynamic response

E5000 supports linearly varying the frequency of the load current to as high as 50kHz.



Standard Accessories

1 set of DC electronic load, 1 set of handles, 1 * USB stick (32G), 1 * parallel cable, 1 * Ethernet cable (3m), 1 * DC protective cover, 1 * power supply cable.