

WOCEN POWER

Product Catalog

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Test Power Supply and System Professional Supplier

WOCEN POWER

High-tech enterprise specializing in
the production of power products



Wocen is innovative and pays attention to the breakthrough and development of its technology. It constantly exchanges and cooperates with many domestic scientific research institutions and becomes a student practice base of Shandong University.

Wocen has passed ISO9001 quality system certification, CE certification, classification society certification, and others and obtained dozens of invention patents.

Shandong Province Hightech Enterprise
Jinan City Innovative Enterprise

COMPANY PROFILE

Shandong Wocen Power Equipment Co., Ltd. has been focusing on power electronics technology for many years and is committed to the research and development of test power supplies and solutions. It is a leading supplier of high-performance test power supplies and system solutions.

Wocen Power is located in Jinan, the city of springs, with a plant area of 20,000 square meters. It is an innovative enterprise in Jinan, a high-tech enterprise in Shandong Province, and a Shandong University student practice base. The main products include power battery simulators, bidirectional DC test power supplies, high-precision DC power supplies, regenerative electronic loads, variable frequency power supplies, shore power supplies, and other products and corresponding test solutions, which are widely used in new energy vehicles, automotive electronics, ships and ports, household appliances, and general device testing.

In recent years, with the rapid development of the electric vehicle industry, Wocen Power is ready to focus on the field of new energy vehicle testing. The EV series battery simulators and bidirectional DC test power supplies provided are technologically advanced and stable in performance. They have achieved outstanding results in testing electric vehicle powertrains, motors, electronic controls, and batteries and have won unanimous praise from industry-leading customers and authoritative testing agencies.

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WOCEN POWER

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Test Power Supply and System Professional Supplier



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WB3000 SERIES

High-Frequency Bidirectional DC Test Power Supply

The WB3000 Series high-frequency bidirectional DC test power supply is developed for R&D and testing in various fields, including electric vehicle drive motors, electric vehicle powertrain systems, DC charging piles, and energy storage converters.

Designed with the new third-generation wide-bandgap semiconductor device SiC, the WB3000 Series emphasizes high frequency, modularity, standardization, and high performance. It is a high-quality bidirectional DC power supply that integrates high precision, high dynamic response, and high efficiency. The product also incorporates a battery simulator (supporting LiFePO₄, NCM, LMO, LCO, lead-acid batteries, and custom battery types) along with CV/CC/CP control functions.

The WB3000 Series high-frequency bidirectional DC test power supply supports continuously adjustable voltage, current, and power across their full ranges. It also features parallel operation capability, and meets the power supply requirements for test items specified in GB/T 18488.1-2015, GB/T 18488.2-2015, and GB/T 29307-2012.



Product Application



Electric Vehicle Motor Testing



Electric Vehicle Motor Controller Testing



Electric Vehicle Powertrain Testing



Electric Vehicle Complete Vehicle Testing



Electric Vehicle DCDC Test



Hybrid Vehicle Generator Testing



Fuel Cell Test System



Fuel Cell DCDC Test



Charging Pile Test



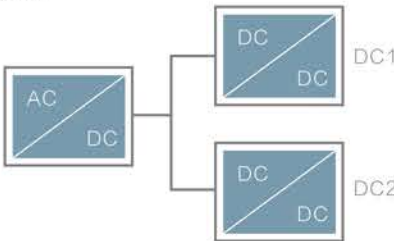
Battery Test

Features

- Designed with brand-new third-generation wide-bandgap semiconductor SiC devices, ensuring stable and reliable operation.
- Features 1.3× peak current capability, with peak current sustainable for 60 seconds.
- Supports dual-channel output, allowing users to select as needed.
- More compact and lightweight, with a power density of up to 198 kW/m³.
- Power modules adopt high-frequency modular design and drawer-type installation, facilitating later equipment maintenance.
- Efficiency exceeds 95%, delivering remarkable energy-saving effects.
- Adopts high-speed digital control technology, achieving an output voltage accuracy of 0.05% F.S.
- Utilizes PWM rectification technology, with a power factor >0.99 and output harmonics <3%.
- Equipped with automatic voltage drop compensation to automatically compensate for line voltage drop.
- Offers battery simulation and DC programmable operating modes.
- Built-in 5 fixed battery models including LiFePO₄, NCM, and LMO, and supports 5 user-customizable battery characteristic curves.
- Operated via a 7-inch touchscreen for convenient operation and display.

Supports Dual-Channel Output

The WB3000 Series power supply supports dual-channel output, which can be optionally configured according to customer requirements. It is suitable for powering two sets of loads with different voltage levels, and for use in back-to-back test benches, enabling energy internal circulation to reduce customers' testing costs.



High Reliability

The series adopts the design of the new third-generation wide-bandgap semiconductor device SiC, which offers higher reliability compared to IGBT-based power supplies.

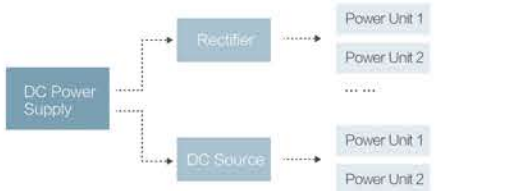
Ultra-Fast Dynamic Response Speed

The rapid voltage dynamic response ensures the stability of the load input voltage, improves test accuracy, and avoids load oscillations caused by voltage fluctuations. Its fast switching time effectively protects the customer's load from the impact of regenerative electrical energy. During motor testing, the sudden reverse regenerative energy from the motor can be quickly fed back to the AC grid via the power supply, preventing motor damage.

When instantaneously loading from 0 to 90% of the rated power (P_e), the voltage recovery time is less than 3ms. This high dynamic performance is achieved through the SiC design combined with the interleaved BUCK topology, which doubles the control loop regulation frequency.

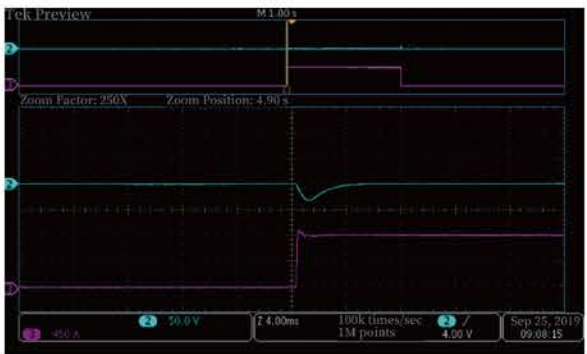
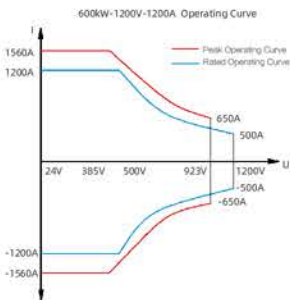
High Power Density Modular Design

The power modules adopt a modular design with a drawer-type installation, enabling convenient disassembly and assembly. This greatly shortens on-site fault troubleshooting time and improves equipment operating efficiency. The whole machine boasts a power density of up to 198 kW/m³, featuring a compact size and light weight.



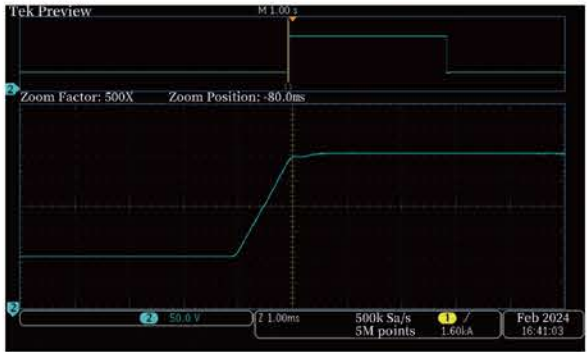
Strong Overcurrent Capability

The product features exceptional overcurrent capability, stably sustaining 1.3 times the rated peak current for a continuous 60 seconds. It can accurately meet the short-term high-current demands in scenarios such as equipment startup and sudden operational fluctuations, effectively preventing operational interruptions caused by instantaneous load overloading.



⚡ Ultra-Fast Voltage Slew Rate

To meet the load dump test requirements of LV123 and VW80300 standards, the voltage online adjustment rate supports ultra-fast regulation at 200 V/ms.



Voltage Slew Rate 200V/ms ($\Delta u=200V/\Delta t=1ms$)

⚡ Ultra-High Voltage/Current Accuracy

Designed with SiC power devices, the voltage accuracy reaches $\pm 0.05\%$ F.S. (Full Scale), and the current accuracy reaches $\pm 0.1\%$ F.S., meeting customers' high-precision requirements.

⚡ Flexible Parallel Operation Function

Supports flexible and convenient parallel operation of multiple units, enabling arbitrary power output from 100 kW to 600 kW.



⚡ Diversified Communication Interfaces

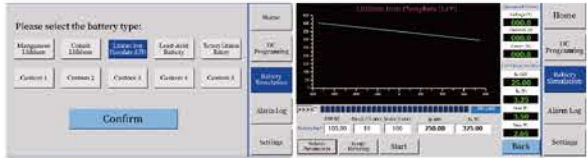
The WB3000 Series power supply provides a variety of communication interfaces:

- >RS485 interface as standard configuration;
- >Ethernet and CAN communication interfaces as optional configurations.

⚡ Up to 10 Battery Simulation Curves

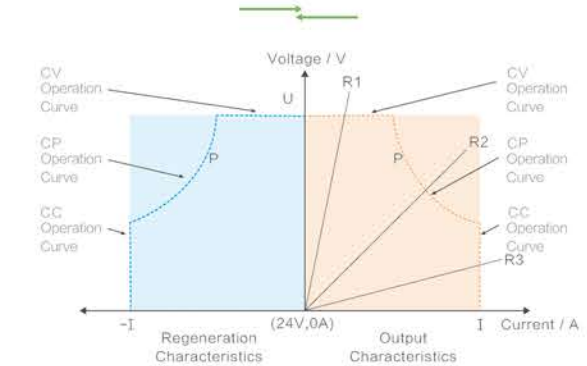
The WB3000 Series high-frequency bidirectional DC test power supply is equipped with DC programming functionality, meeting customers' requirements for voltage and time programming.

The battery simulation function has 5 built-in common battery types, allowing users to select types (including LiFePO₄, NCM, LMO, LCO, lead-acid batteries, etc.) and set the number of series/parallel cells and initial SOC. It also supports 5 user-customizable battery types, enabling storage of custom I-V curve data that can be directly called and output when needed.



⚡ Multiple Operating Modes: CV/CC/CP

The power supply features multiple operating modes. The voltage, current, and power values can be set according to the actual load conditions. It automatically switches between operating modes during operation, reliably protecting the system from instability and preventing load damage caused by abnormal operation.



⚡ Ultra-High Output Efficiency

Adopting a high-frequency design scheme, it eliminates the high-power-consumption low-frequency isolation transformer, achieving an overall system efficiency of over 95%.

⚡ Specifications and Models

Model	Rated Power	Output Voltage	Rated Current	Peak Current	Size (W*H*D)
WB3100-1200-300	100kW	12-1200V	± 300A	± 450A	900*1080*2000mm
WB3200-1200-600	200kW	12-1200V	± 600A	± 780A	900*1080*2000mm
WB3300-1200-900	300kW	12-1200V	± 900A	± 1170A	900*1080*2000mm
WB3400-1200-1200	400kW	12-1200V	± 1200A	± 1560A	1400*1080*2000mm
WB3500-1200-1200	500kW	12-1200V	± 1200A	± 1560A	1400*1080*2000mm
WB3600-1200-1200	600kW	12-1200V	± 1200A	± 1560A	1400*1080*2000mm

⚡ Technical Parameters

Output	Version	Standard Version
	Voltage Accuracy	$\pm 0.05\%$ F.S.
	Current Accuracy	$\pm 0.1\%$ F.S.
	Response Time	3ms
	Switching Time	6ms
	Voltage Slew Rate	200V/ms
	Voltage Ripple	$\leq 0.1\% \cdot F.S.$
Input	Current Ripple	$\leq 0.1\% \cdot F.S.$
	Input Mode	Three-phase three-wire + PE
	Grid Voltage	$380V \pm 15\%$
	Grid Frequency	47-63Hz
	Current THD	$\leq 3\%$
Security features	Power Factor	≥ 0.99
	Insulation Resistance	$\geq 20M\Omega$ (500Vdc)
	Withstand Voltage Performance	3000Vdc(60s, no arcing or breakdown)
	Grounding Resistance	$\leq 100m\Omega$
Working environment	Ambient Temperature	$-10^{\circ}C \sim 40^{\circ}C$
	Ambient Humidity	10%~90%(non-condensing)
	Altitude	$\leq 2000m$
Communication interface		RS485, CAN, LAN
Protection grade		IP21 (indoor use)
Cooling mode		Forced air cooling

Optional Functions:

- Distribution Box PDU:** Enables convenient wiring at the load end, facilitating on-site system integration and enhancing safety protection.
- Discharge Device PDSB:** Effectively prevents back-fed energy from damaging test equipment in the event of grid faults or power supply anomalies.
- Capacitor Cabinet:** Designed to meet the demand for smaller voltage fluctuations, achieving dynamic performance that matches or even surpasses imported equipment.
- Insulation Monitoring Function:** Real-time online monitoring of the insulation resistance between the output positive/negative poles and ground, ensuring the electrical safety of the equipment.

Notes:
Output voltage is selectable from **50V to 1500V**;
Rated current and peak current can be customized according to customer requirements.

EVWB Series

Bidirectional DC Test Power Supply

The EVWB series bidirectional DC test power supply features bidirectional energy flow. It can not only supply power to loads, but also feed electric energy back to the power grid without pollution, helping users save electricity costs. Taking the 600kW power supply as an example: the bidirectional DC test power supply supports continuously adjustable full-range parameters, including voltage of 24~1200V, current of 0~1200A (peak 1560A), and power of 0~600kW (peak 780kW). It is also equipped with parallel operation capability.

It has 5 built-in battery models (lithium iron phosphate, ternary lithium, lithium manganate, lithium cobaltate, and lead-acid batteries), supports I-V curve preview, and allows users to customize 5 additional battery models.

The EVWB series bidirectional DC test power supply is suitable for R&D, type tests, reliability tests, and production line outgoing tests of products in fields such as electric vehicle motors and their controllers, and electric vehicle powertrain systems. It meets the power supply requirements for test items specified in national standards including GB/T 18488.1-2015, GB/T 18488.2-2015, and GB/T 29307-2012.



Product Application

M

Electric Vehicle Motor Testing
Electric Vehicle Motor
Controller Testing

Electric Vehicle
Powertrain Testing

Electric Vehicles
Vehicle Testing

Electric Vehicle
DCDC Test

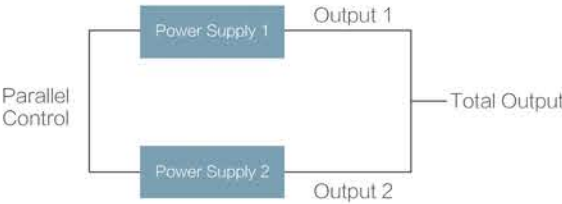
Hybrid Vehicle
Generator Testing

Features

- It features battery simulation and DC programming operating modes;
- Built-in 5 battery model curves including LiFePO₄, NCM, and LMO, with support for 5 user-customized battery characteristic curves;
- Adopts four-quadrant control technology, enabling bidirectional energy flow at full power, with stable and reliable operation and high energy efficiency;
- Offers multiple output modes: constant voltage (CV), constant current (CC), and constant power (CP);
- Transient response time $\leq 3\text{ms}$;
- Utilizes high-speed digital control technology, achieving an output accuracy of 0.1%;
- Employs PWM rectification technology, with a power factor >0.99 , input harmonics $<3\%$, and efficiency $>93\%$;
- Has an automatic voltage drop compensation function to automatically compensate for line voltage drops;
- Operated via a 7-inch touchscreen for convenient operation and display;
- Output parameters and protection parameters are programmable, making it suitable for testing different types of equipment;
- Internal components are from international brands, ensuring high equipment reliability;
- Adopts a modular design, simplifying later-stage equipment maintenance.

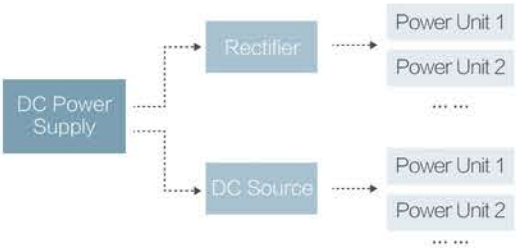
Parallel Operation Function

Supports parallel output of power supplies to achieve capacity expansion.



Modular Design

The PWM rectification section and bidirectional DC/DC section of the EVWB Series power supply adopt standard-designed modular units respectively. The modular design features high reliability and convenient, efficient assembly and maintenance.



Fast Transient Response

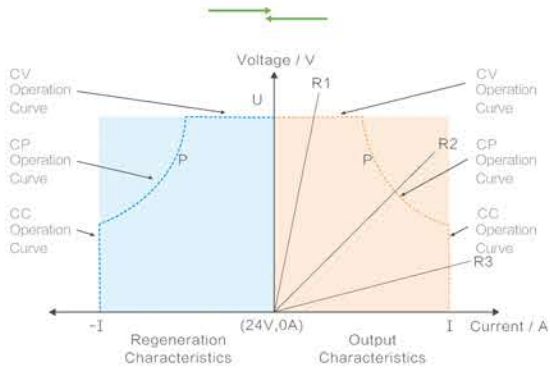
The EVWB Series power supply features fast voltage dynamic response, which ensures the stability of the load input voltage, improves test accuracy, and avoids load oscillation caused by voltage fluctuations. Its fast switching time effectively protects the customer's load from the impact of feedback energy. During motor testing, the reverse feedback energy suddenly generated by the motor can be quickly fed back to the AC grid through the power supply, preventing motor damage.



CH2: Output voltage waveform; CH3: Output current waveform
EVWB-500-1000 (500kW, 1000V, 1000A) transient test: It can be seen from the waveforms that under a 500V output state, when a 900A current load is suddenly applied, the voltage recovery time is approximately 3ms.

CV/CC/CP Operating Modes

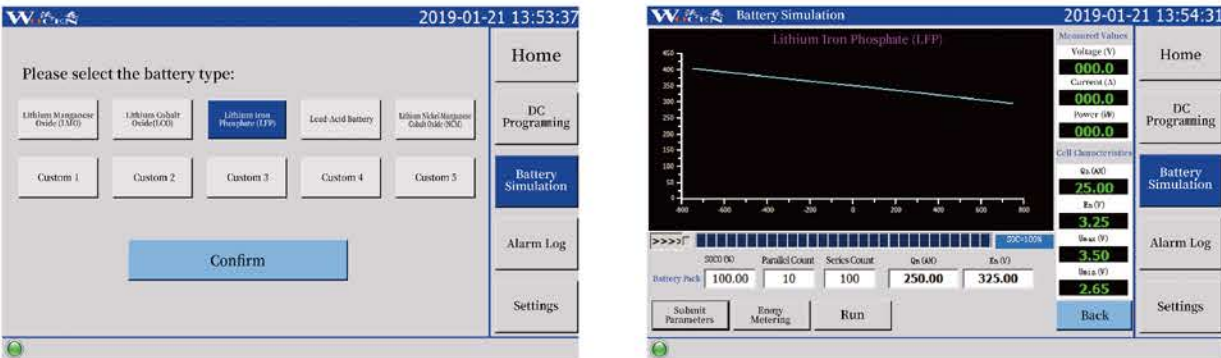
The EVWB Series power supply features multiple operating modes. The voltage, current, and power values can be set according to the actual load conditions. The power supply automatically switches between operating modes during operation, reliably protecting the system from unstable operation and preventing load damage caused by abnormal operation.



R1, R2, and R3 are three loads with different resistances. When R1 intersects the set voltage U line, it operates in CV mode; when R2 intersects the set power P line, it operates in CP mode; when R3 intersects the set current I line, it operates in CC mode.

Battery Simulation Function

The EVWB series battery simulators are equipped with DC programming functionality, enabling customers to program voltage and time parameters. The battery simulation function has 5 built-in common battery types, allowing users to select from options such as lithium iron phosphate, ternary lithium, lithium manganese, lithium cobalt oxide, and lead-acid batteries. Users can set the number of series-connected cells, parallel-connected cells, and initial SOC, with support for IV curve preview. Additionally, the system allows users to customize 5 battery types, store custom IV curve data, and directly call and run the curve output when needed.

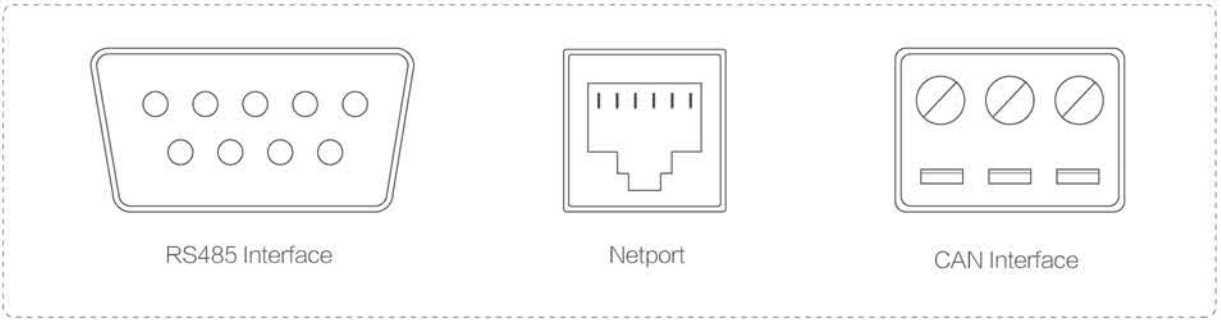


Bidirectional Energy Flow & Seamless Switching

The EVWB series power supplies feature bidirectional energy flow. During motor testing, the power supply provides stable DC voltage to the load to meet normal testing requirements. In the event of abnormal testing or system shutdown, the power supply can feed back the energy generated by the motor in its generating state to the grid, preventing load damage caused by energy accumulation. The bidirectional energy flow can be automatically and seamlessly switched, effectively avoiding voltage or current overshoot phenomena.

Diversified Communication Interface Design

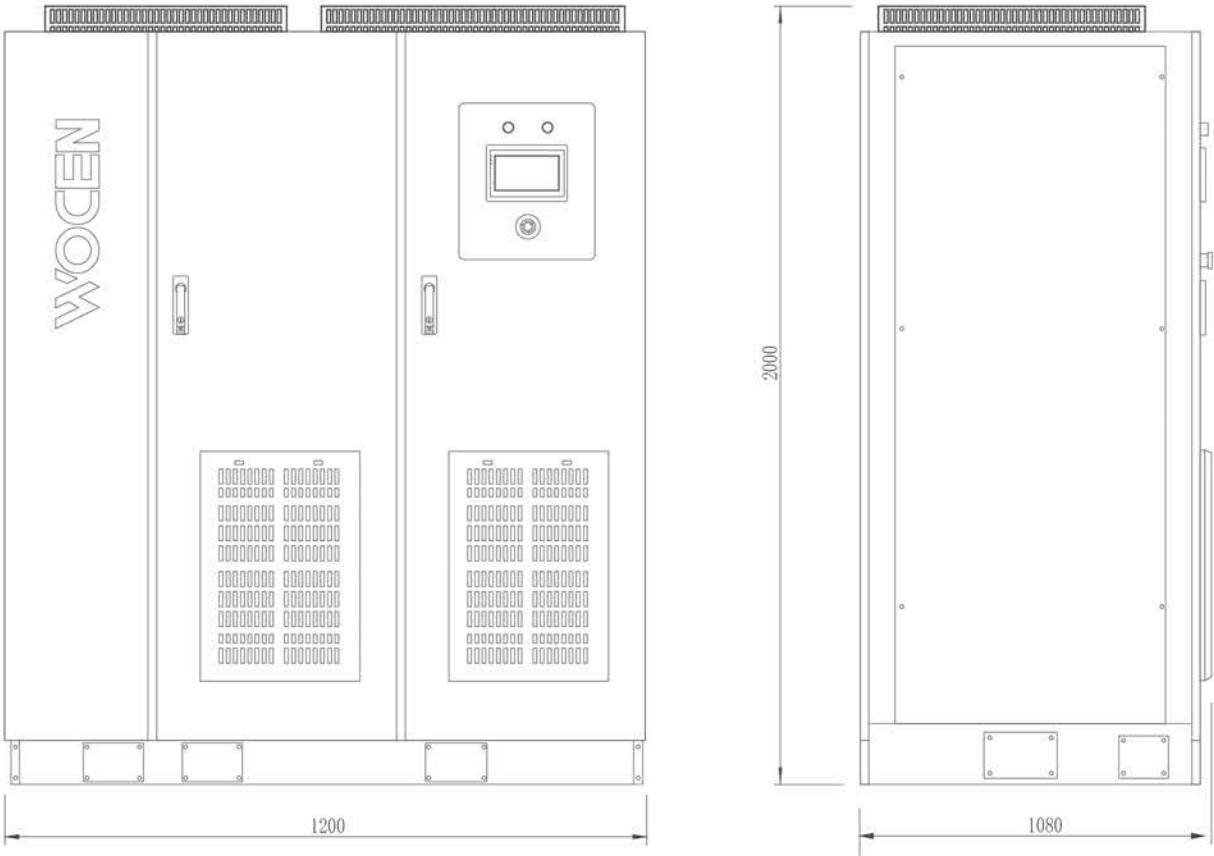
The EVWB series power supplies are equipped with a variety of communication interfaces:
RS485 interface as standard configuration;
Optional Ethernet and CAN communication interfaces.



Specifications and Models

Model	Rated Power	Peak Power	Output Voltage	Rated Voltage	Rated Current	Peak Current	Size (WxHxD)
EVWB-050-1000-200	50kW	75kW	24 ~ 1000V	250V	±200A	±300A	800x1800x950mm
EVWB-080-1000-300	80kW	120kW	24 ~ 1000V	267V	±300A	±450A	1200x2000x1080mm
EVWB-160-1000-500	160kW	208kW	24 ~ 1000V	320V	±500A	±650A	
EVWB-200-1000-500	200kW	260kW	24 ~ 1000V	400V	±500A	±650A	
EVWB-250-1000-600	250kW	325kW	24 ~ 1000V	417V	±600A	±780A	1800x2000x1080mm
EVWB-300-1000-600	300kW	390kW	24 ~ 1000V	500V	±600A	±780A	
EVWB-400-1000-1000	400kW	520kW	24 ~ 1000V	400V	±1000A	±1300A	2200x2000x1200mm
EVWB-500-1000-1200	500kW	650kW	24 ~ 1000V	417V	±1200A	±1560A	
EVWB-600-1000-1200	600kW	780kW	24 ~ 1000V	500V	±1200A	±1560A	2700x2200x1200mm

* Note: 1) The output voltage can be selected as **24-800V** or **24-1200V**.
2) The rated current, peak current, and output voltage are configurable.



⚡ Technical Parameters

AC characteristic	Input mode	Three-phase Three-wire + PE
	Voltage	AC380V+15%
	Frequency	50Hz±5Hz
	Power factor	≥0.99
	Total current harmonic	≤3%
DC characteristic	Output accuracy	≤±0.1%F.S.
	Source effect	≤0.1%F.S.
	Load effect	≤0.1%F.S.
	Ripple (Vrms)	≤0.2%F.S.
	Response time	≤3ms(10%~90% sudden loading)
Feedback characteristic	Alternating current voltage	AC323V~437V (Allowable voltage range)
	Ac frequency	45Hz~55Hz(Allowable grid frequency)
	Power factor	≥0.99
	Total harmonic content	≤3%
	Switching timer	≤6ms(+90%~-90%switching)
	Feedback power	Supports full scale power feedback
Communication interface		RS485, CAN, LAN
Safety feature	Insulation resistance	≥20MΩ
	Voltage resistance	2000VDC test 60S, no flashover, breakdown
	Ground resistance	≤100mΩ
Noise		≤75dB
Protection grade		IP21(Indoor)
Cooling mode		Forced air cooling
Working environment	Ambient temperature	-10~45℃
	Ambient humidity	10%~90%(no condensation)
	Altitude	≤2000m

Optional Functions:

- 1.Distribution Box PDU:** Enables convenient wiring at the load end, facilitating on-site system integration and enhancing safety protection.
- 2.Discharge Device PDSB:** Effectively prevents back-fed energy from damaging test equipment in the event of grid faults or power supply anomalies.
- 3.Capacitor Cabinet:** Designed to meet the demand for smaller voltage fluctuations, achieving dynamic performance that matches or even surpasses imported equipment.
- 4.Insulation Monitoring Function:** Monitors the insulation impedance of the positive/negative output poles to ground in real time, ensuring the electrical safety of the equipment.

EVWBT Series

Bidirectional Dual-channel DC Test Power Supply

The EVWBT series bidirectional dual-channel DC test power supply features bidirectional energy flow: it can not only supply power to the load but also feed clean electrical energy back to the grid, helping users reduce electricity costs.

It is equipped with two independent DC output channels, allowing separate configuration of voltage, current and other parameters for each channel. This makes it particularly suitable for energy-regenerative back-to-back test benches, and can adapt to motor controllers with two different voltage levels.

Built-in with 5 battery models (LFP/NC-M/LMO/LCO/lead-acid batteries), it supports IV curve preview and allows users to customize 5 additional battery models.



Product Application

M

Electric Vehicle Motor Testing
Electric Vehicle Motor
Controller Testing

Electric Vehicle
Powertrain Testing

Electric Vehicle Complete
Vehicle Testing

Electric Vehicle
DCDC Test

Hybrid Vehicle
Generator Testing

⚡ Features

- › Supports battery simulation and DC programming operating modes.
- › Built-in 5 battery model curves (including LFP, NCM, LMO, etc.), and allows users to customize 5 additional battery characteristic curves.
- › Adopts four-quadrant control technology, enabling bidirectional energy flow across full power, ensuring stable and reliable operation with high energy efficiency.
- › Offers multiple output modes: constant voltage, constant current, and constant power.
- › Transient response time $\leq 3\text{ms}$.
- › Utilizes high-speed digital control technology, achieving an output accuracy of 0.1%.
- › Employs PWM rectification technology, with a power factor > 0.99 , input harmonics $< 3\%$, and efficiency $> 93\%$.
- › Features automatic voltage drop compensation to automatically compensate for line voltage drops.
- › Operated via a 7-inch touchscreen for convenient operation and display.
- › Programmable output parameters and protection parameters, suitable for testing different types of equipment.
- › Uses international brand internal components for high equipment reliability.
- › Adopts a modular design for easy post-maintenance.

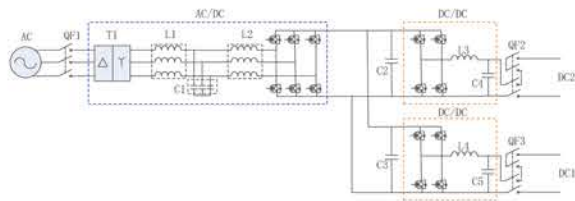
⚡ Specifications and Models

Model	Rated Power	Peak Power	Output Voltage	Rated Voltage	Rated Current	Peak Current	Size (WxHxD)
EVWBT-050-1000-200	50kW	75kW	24 ~ 1000V	250V	$\pm 200\text{A}$	$\pm 300\text{A}$	1150x1900x950mm
EVWBT-080-1000-300	80kW	120kW	24 ~ 1000V	267V	$\pm 300\text{A}$	$\pm 450\text{A}$	
EVWBT-160-1000-500	160kW	208kW	24 ~ 1000V	320V	$\pm 500\text{A}$	$\pm 650\text{A}$	1800x2000x1080mm
EVWBT-200-1000-500	200kW	260kW	24 ~ 1000V	400V	$\pm 500\text{A}$	$\pm 650\text{A}$	
EVWBT-250-1000-600	250kW	325kW	24 ~ 1000V	417V	$\pm 600\text{A}$	$\pm 780\text{A}$	2400x2000x1080mm
EVWBT-300-1000-600	300kW	390kW	24 ~ 1000V	500V	$\pm 600\text{A}$	$\pm 780\text{A}$	
EVWBT-400-1000-1000	400kW	520kW	24 ~ 1000V	400V	$\pm 1000\text{A}$	$\pm 1300\text{A}$	2200x2000x1200+
EVWBT-500-1000-1200	500kW	650kW	24 ~ 1000V	417V	$\pm 1200\text{A}$	$\pm 1560\text{A}$	1200x2000x1200mm
EVWBT-600-1000-1200	600kW	780kW	24 ~ 1000V	500V	$\pm 1200\text{A}$	$\pm 1560\text{A}$	2700x2200x1200+ 1200x2200x1200mm

- * Notes:
- 1) Output voltage can be selected as 24~800V or 24~1200V.
 - 2) Rated current, peak current and peak power can be customized according to customer requirements.
 - 3) Dual-channel output: Each channel can independently set its rated output power, voltage and current. The sum of the output powers of the two channels operating simultaneously shall not exceed the rated total power.

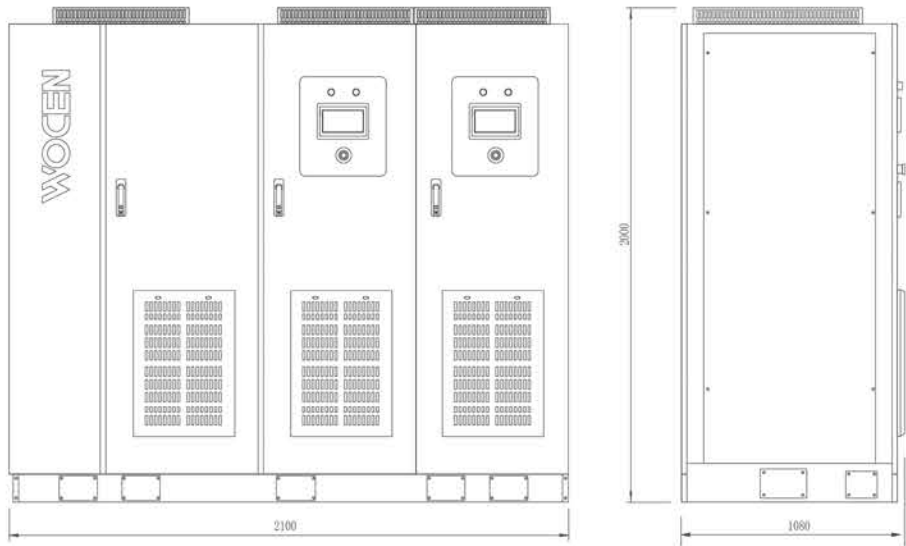
⚡ Dual Independent Outputs

The EVWBT series power supplies feature two independently adjustable DC output channels, suitable for powering two sets of loads with different voltage levels. When used in back-to-back test benches, they enable an internal energy cycle, reducing test costs for customers.



⚡ Technical Parameters

AC characteristic	Input mode	Three-phase three wire +PE
	Voltage	AC380V $\pm 15\%$
	Frequency	50Hz $\pm 5\text{Hz}$
	Power factor	≥ 0.99
	Total current harmonic	$\leq 3\%$
DC characteristic	Output accuracy	$\leq \pm 0.1\% \text{F.S.}$
	Source effect	$\leq 0.1\% \text{F.S.}$
	Load effect	$\leq 0.1\% \text{F.S.}$
	Ripple (Vrms)	$\leq 0.2\% \text{F.S.}$
	Response time	$\leq 3\text{ms}$ (10%~90% sudden loading)
Feedback characteristic	AC voltage	AC323V~437V (Allowable voltage range)
	AC frequency	45Hz~55Hz (Allowable grid frequency)
	Power factor	≥ 0.99
	Total harmonic content	$\leq 3\%$
	Switching time	$\leq 6\text{ms}$ (+90%~-90% switching)
Communication interface		RS485, CAN, LAN
Security feature	Insulation resistance	$\geq 20\text{M}\Omega$
	Voltage resistance	2000Vdc test 60S, no flashover, breakdown
	Ground resistance	$\leq 100\text{m}\Omega$
Noise		$\leq 75\text{dB}$
Protection grade		IP21 (Indoor)
Cooling mode		Forced air cooling
Working environment	Ambient temperature	$-10\sim 45^{\circ}\text{C}$
	Ambient humidity	10%~90% (no condensation)
	Altitude	$\leq 2000\text{m}$



HB SERIES

Bidirectional Programmable DC Test Power Supply

The HB series bidirectional programmable DC test power supply has the characteristics of source and load integration. It can provide a DC power supply for the load and feedback the electric energy to the electrical grid without pollution. It adopts the international standard 3U chassis and provides a power output capacity of up to 30kW. At the same time, the power supplies of the same model can be connected in parallel to achieve a more substantial output capacity. The HB series bidirectional programmable DC test power supply provides powerful programmable testing capabilities and has multiple automotive test standards embedded, which is convenient for users to call quickly. It is particularly suitable for early research and development, later type testing, reliability testing, and product factory testing in production lines in new energy vehicle motors and their controllers, electric vehicle assembly systems, battery testing, automotive electronics, power supply testing, etc.



Features

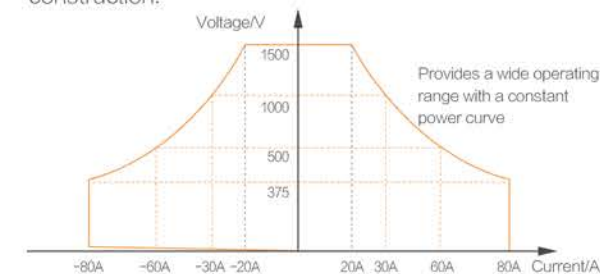
- Integrated Source & Load: Features both DC source and regenerative load characteristics.
- Bidirectional energy flow with seamless switching across the full power range.
- Wide-range constant power output capability, delivering a broad output range.
- Equipped with an internal resistance mode, supporting battery simulator functionality.
- Auto-detecting voltage compensation terminals.
- Arbitrary waveform generator, supporting multi-curve cycling.
- Master-slave operation function, enabling autonomous current-sharing parallel operation of multiple units.
- Standard interfaces: RS485/232, CAN, LAN. Standard protocols: MODBUS-RTU, CAN 2.0B, MODBUS-TCP.
- Compatible with the WOCEN POWER CONTROL host control software.
- Can function as a PV simulator (when used with the WOCEN POWER CONTROL upper computer control software), supporting I-V curve simulation for solar cell arrays.
- Can function as a battery simulator (when used with the WOCEN POWER CONTROL upper computer control software), with 5 built-in battery model curves for lithium iron phosphate, ternary lithium, lithium manganate and other battery types, and allows users to customize an additional 5 battery characteristic curves.

Product Application



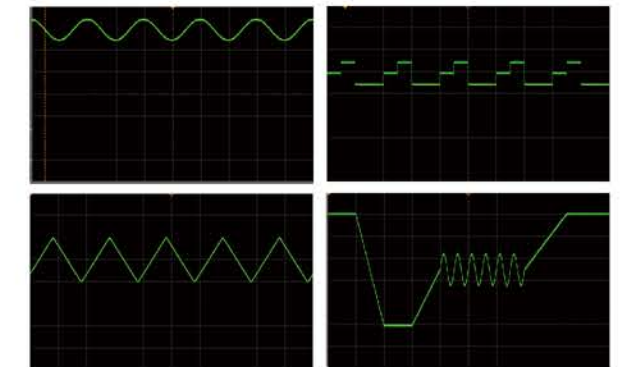
Auto-ranging wide range output & feed capability Powerful Arbitrary Waveform Generator

Compared to traditional fixed-range DC power supplies, the HB series can output full power across a wide range of voltage and current combinations within its power range. A single HB power supply covers the output range of three traditional power supplies. For example, the HB series power supply with a 500V/90A/15kW model can provide an output of 500V30A or 166.6V90A and can provide full power output or power feeding at any voltage point between 166.6V and 500V, greatly reducing the complexity and space occupied by system construction.



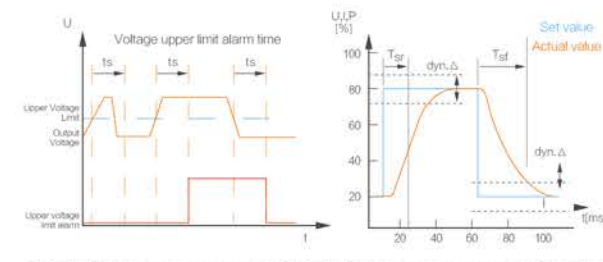
▲ HB series programmable power supply output characteristic curve

The HB series built-in multiple waveform generators allow users to easily realize the single or combined output of triangular/rectangular/trapezoidal/sine/ step waveforms and apply these waveforms to an output voltage or output current. They provide users with powerful programmable test capability.



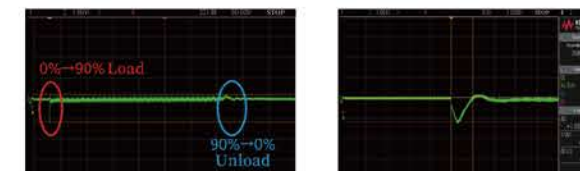
Reliable Protection Mechanism

HB series provides a comprehensive and reliable protection mechanism. It provides a fast and reliable protection alarm mechanism for abnormal input AC voltage (too high, too low, phase loss), abnormal DC bus voltage (too high, too low), internal power tube overcurrent, overtemperature, output overvoltage, under voltage, output overcurrent, output current overrun, voltage /current step time overrun, inverse connection of compensation terminal or over-compensation and other abnormal conditions, and the protection threshold related to the load is settable.



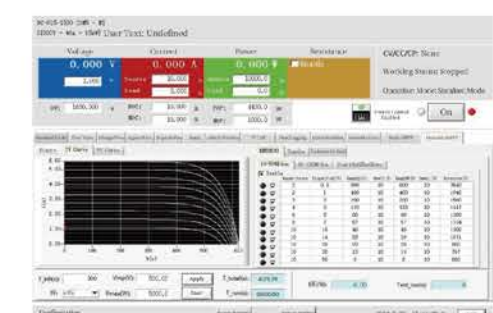
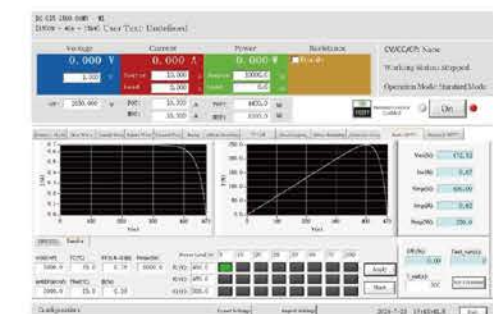
Fast Dynamic Response

With advanced multi-loop composite control technology, HB series provides fast dynamic response capability, instantaneous load voltage drop<1%, almost no voltage process during unloading, and dynamic response time<2ms.



Photovoltaic simulation function (upper computer)

HB series power supplies have professional photovoltaic simulation software to complete MPPT performance tests under EN50530/SANDIA regulations. The software can simulate the output characteristics of various solar cells, simulate the I-V curves under different temperatures and illumination, test and display the maximum power tracking status of photovoltaic inverters in real-time, and realize static and dynamic MPPT performance tests of inverters. It meets various safety test requirements, can verify the IV output characteristic curve for users throughout the day, and records data for analysis.



⚡ Battery simulation function (upper computer + lower computer)

The HB series is equipped with a standard battery simulation function, which can simulate various battery output characteristic curves. The battery simulation function can also be realized by controlling the power supply through the upper computer (the upper computer software supports customized battery models, making the operation more intuitive). You can edit battery type, number of series connections, number of parallel connections, Soc; input battery type (including lithium manganese oxide, lithium cobalt oxide, lithium iron phosphate, lead acid battery, ternary lithium battery);



⚡ Specification and models

Model	Voltage	Current	Power	Size
HB-005-100-170	100V	170A	5kW	3U
HB-010-100-340		340A	10kW	3U
HB-015-100-510		510A	15kW	3U
HB-007-330-75	330V	75A	7kW	3U
HB-014-330-150		150A	14kW	3U
HB-021-330-225		225A	21kW	3U
HB-005-500-40	500V	40A	5kW	3U
HB-010-500-80		80A	10kW	3U
HB-015-500-120		120A	15kW	3U
HB-007-500-40		40A	7kW	3U
HB-014-500-80		80A	14kW	3U
HB-021-500-120		120A	21kW	3U
HB-030-500-240		240A	30kW	3U
HB-007-750-25	750V	25A	7kW	3U
HB-014-750-50		50A	14kW	3U
HB-021-750-75		75A	21kW	3U
HB-010-1000-40	1000V	40A	10kW	3U
HB-014-1000-40		40A	14kW	3U
HB-021-1000-75		75A	21kW	3U
HB-015-1500-45	1500V	45A	15kW	3U
HB-021-1500-60		60A	21kW	3U
HB-030-1500-80		80A	30kW	3U
HB-021-2250-45	2250V	45A	21kW	3U

⚡ Technical Parameters

Input parameter	3-phase 3-wire+PE, -10/+15%, 45-65HZ
Energy feedback efficiency	≤94.5%
Display mode	4.3-inch color LCD
Voltage accuracy	≤0.05%F.S.
Current accuracy	≤0.1%F.S.
Setting accuracy	≤1%Pmax
+10% point Uac linear adjustment rate	≤0.02%Umax
Load adjustment rate from 0-100%	≤0.05%Umax
Time required for load to rise from 10~90%AUout	≤30ms
Transient recovery time	<1.5ms
Efficiency	~90%
Noise	≤65dB (A)
Overvoltage protection	0~110%Umax adjustable
Protection and alarm	Module fault alarm (including input voltage abnormal protection, DC bus voltage abnormal protection, internal overcurrent protection, short circuit protection, etc.), output overvoltage alarm (software + hardware), overcurrent protection, internal overheating alarm.
Cooling method	temperature controlled forced air cooling
Parallel work	supports up to 10 master-slave mode wells
Operating temperature	0~40℃
Storage temperature	-20~70℃
Humidity	<80%, no condensation
Overall Dimensions (W×H×D)	482*132.5*740(tree) 482*132.5*850(maximum size) Note: Subject to the actual product!

MP SERIES

High performance programmable DC test power supply

The MP series programmable DC power supply is characterized by fast dynamic response, high output accuracy, and low output ripple. The international standard 3U chassis is adopted to provide up to 15kW power output capacity. The power supply is provided with a wide range output capacity of automatic range and flexible output capacity of high voltage, low current, or low voltage and high current. Supporting powerful arbitrary waveform generator, providing more comprehensive power supply test capability. It is especially applicable to various test system integration, test benches, laboratories, production lines, and other occasions, as well as military industry, scientific research institutes, or maintenance organizations.



Features

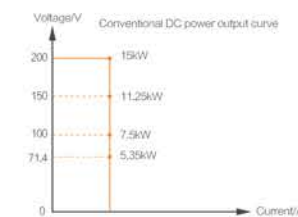
- Automatic range, wide range constant power output;
- Output voltage: 0~80V to 0~2250V;
- Output current: 0~20A to 0~510A, parallel connection can be extended to 5100A;
- Output power: 0~5kW to 0~15kW, extended to 150kW in parallel;
- Adopt active power factor correction technology; the power factor is as high as 0.99;
- High output accuracy: <0.1% V_{max} , <0.2% I_{max} ;
- Fast dynamic response: <2ms, low output ripple: <0.03% V_{rms} ; Automatic conversion of three working modes: constant voltage, constant current, and constant power;
- Arbitrary waveform generator with multiple waveform edit modes, built-in multiple independent curves, providing users with accurate test waveforms;
- Support multiple remote control, standard port: CAN, RS485/ 232, LAN; optional port: USB, analog control;
- Supporting WOCEN POWER CONTROL remote control software;
- Support the internal (external) discharge module with a maximum discharge power of up to 3kW.

Product Application

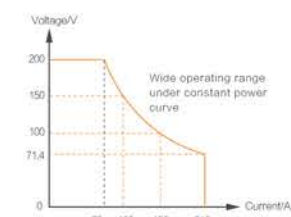


Wide range output capability with automatic range

Compared to traditional fixed range DC power supplies, the MP series can output full power across a wide range of voltage and current combinations within its power range. A single MP power supply covers the output range of three traditional power supplies. For example, the 200V/210A/15kW model of the MP series power supply can provide an output of 200V75A or 71.4V210A and can offer a full power output of 15kW at any voltage point between 71.4V and 200V, significantly improving the output power supply capability of the product and significantly reducing the complexity and space occupied by the system setup.



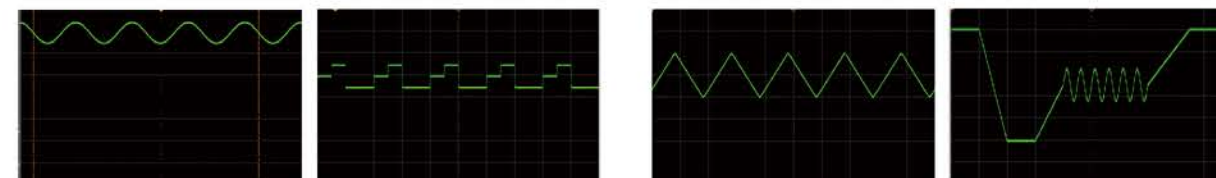
Conventional power output curve



MP series programmable power supply output characteristic curve

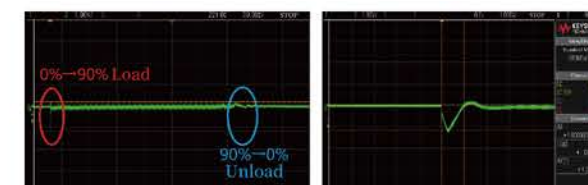
Powerful Arbitrary Waveform Generator

The MP series built-in multiple waveform generators allow users to easily realize the single or combined output of triangular/rectangular/trapezoidal/sine/ step waveforms and apply these waveforms to an output voltage or output current. They provide users with powerful programmable test capability.



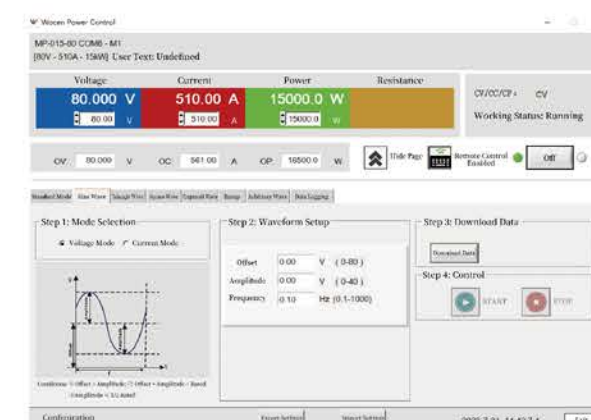
Fast Dynamic Response

With advanced multi-loop composite control technology, MP series provides fast dynamic response capability, instantaneous load voltage drop <1%, almost no voltage process during unloading, and dynamic response time <2ms.



WOCEN POWER CONTROL upper computer monitoring software

- WOCEN POWER CONTROL is a newly developed Windows monitoring software platform;
- Automatic equipment scanning, supports simultaneous monitoring of multiple different lower computers, multi-threaded control, and no mutual influence;
- Supports output parameter display/setting, start/stop control, protection parameter configuration, status indication function generator, and provides 100-step arbitrary waveform editing capabilities;
- Data storage, providing storage of user configuration, function generator editing data, and real-time output data;
- Storage and call function, supports user-defined storage path, storage time interval, etc.
- Supports RS232, RS485, USB, LAN network port control;
- Supports MP (V1.2), HB, GP-1.5/3kW series products (continuously updated)



⚡ Specification and Models

Model	Voltage	Current	Power	Size
MP-001.5-80	80V	60A	1.5kW	2U
MP-003-80	80V	120A	3kW	2U
MP-001.5-750	750V	6A	1.5kW	2U
MP-003-750	750V	12A	3kW	2U
MP-003-1000	1000V	10A	3kW	2U
MP-003-1500	1500V	6A	3kW	2U
MP-005-80	80V	170A	5kW	3U
MP-010-80	80V	340A	10kW	3U
MP-015-80	80V	510A	15kW	3U
MP-005-200	200V	70A	5kW	3U
MP-010-200	200V	140A	10kW	3U
MP-015-200	200V	210A	15kW	3U
MP-005-360	360V	40A	5kW	3U
MP-010-360	360V	80A	10kW	3U
MP-015-360	360V	120A	15kW	3U
MP-005-500	500V	30A	5kW	3U
MP-010-500	500V	60A	10kW	3U
MP-015-500	500V	90A	15kW	3U
MP-005-750	750V	20A	5kW	3U
MP-010-750	750V	40A	10kW	3U
MP-015-750	750V	60A	15kW	3U
MP-015-1000	1000V	40A	15kW	3U
MP-015-1500	1500V	40A	15kW	3U
MP-015-2250	2250V	25A	15kW	3U

⚡ Technical Parameters

Input	Number of phases	3-phase 3-wire +PE(single-phase input for <3kW models)
	Voltage	342~460VAC(AC220V input for <3kW models)
	Frequency	45~65Hz
Display Mode		4.3" color LCD
Voltage resolution		0.01V/0.001V
Current resolution		0.01A/0.001A
Power resolution		0.001kW/0.0001kW
Set accuracy ①	Voltage	≤0.1%U _{max}
	Current	≤0.2%I _{max}
Measurement accuracy②	Voltage	≤0.1%U _{max}
	Current	≤0.2%I _{max}
Load effect	Voltage	≤0.05%U _{max}
	Current	≤0.15%I _{max}
Source Effect	Voltage	≤0.02%U _{max}
	Current	≤0.05%I _{max}
Load Response Time ③		≤2mS
10%~90% Rise Time		30mS
Temperature Drift	Voltage	0.05% Set Value
	Current	0.05% Set Value
Noise		≤65dB (A)
Overvoltage protection		0 to 110%U _{max} adjustable
Maximum lead pressure drop compensation		30V(1500V power supply)
Output discharge time		Less than 1S(when equipped with energy absorption unit)
Digital communication interface		Standard port,CAN, RS485/232+LAN Remote port,① USB, RS485+ analog ②USB, RS232+ analog ③USB, LAN+ analog ④USB, CAN+ analog
Analog programming interface		Start, stop, alarm, 0~5V or 0~10V analog control output
Protection and Alarm		Module fault alarm (including input voltage abnormality protection, DC bus voltage abnormality protection, internal overcurrent protection, short circuit protection, etc.), output overvoltage alarm (software + hardware), overcurrent protection, internal overheating alarm, output wire compensation fault alarm
Cooling method		Temperature controlled forced air cooling
Parallel operation		Support a maximum of 10 parallel nodes in master/slave mode
Operating temperature		0~40℃
Storage Temperature		-20~70℃
Humidity		<80% no condensation
Overall Dimension(W×H×D)		19"standard chassis 3U height, 482x132.5x650mm(bare)482x132.5x742.5mm(Max)
Weight		18kg(5kW), 26kg(10kW), 33kg(15kW)
Remark		1. Set the test condition of accuracy to 25℃±5℃; 2. The measurement accuracy is the error between the actual value of the DC output and the displayed value; 3. The time required for the load to change from 100% to 50% or reverse, and the output voltage to recover to within the "rated value +100mV".

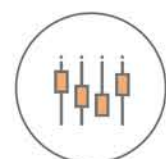
GP Series (1.5-3kW)

Programmable DC Test Power Supply

The GP Series (1.5-3kW) programmable DC test power supply is specially developed for various DC test systems, test benches, laboratories, research institutes and manufacturing enterprises. It is used to replace batteries in testing power tools, motors, automotive electronics, LEDs, system power supply and other fields. Featuring excellent output performance, compact size, light weight, easy operation and reliable performance, it is an advanced multi-purpose DC power supply.



Product Application



Automotive
Electronics Testing



Electrical
Machinery



Power Tools



LED



Home
Appliances



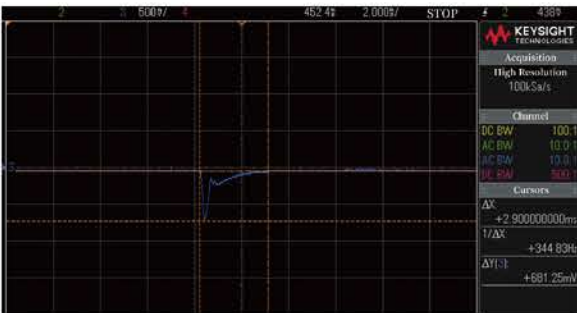
Scientific Research
Institutions

Features

- Compact and lightweight, 19-inch 2U standard rack-mount design with a depth of only 380mm.
- Comprehensive protection functions: module fault protection, over-temperature protection, over-voltage protection, under-voltage protection, over-current protection, over-compensation protection, and reverse polarity protection for compensation terminals.
- Supports power-on startup configuration: the device can be set to auto-start output or manual-start output to meet more application scenarios.
- Built-in programmable function supports user-defined waveform output; compatible with WOCEN POWER CONTROL host monitoring software, providing rich programmable test and real-time data logging functions.
- Adopts high-frequency soft-switch control technology, featuring electrical isolation between input and output, high overall efficiency, and fast dynamic response.
- Multi-stage differential-mode and common-mode output filtering design, combined with multi-loop control technology, delivers cleaner output ripple and higher output accuracy.
- Supports multiple remote control methods: standard RS485/232, CAN, and LAN ports, with built-in MOD-BUS-RTU, MODBUS-TCP, and CAN2.0B protocols.

Fast Dynamic Response

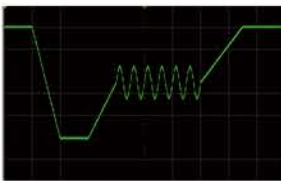
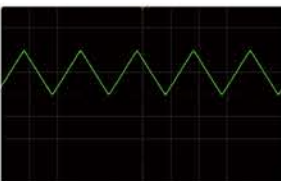
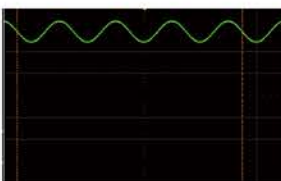
The GP Series (1.5-3kW) programmable DC test power supply adopts multi-loop waveform correction for its output, delivering excellent transient performance. For load changes from 10% to 90% and 0% to 50%, the transient response time is less than 5ms, and the voltage variation is less than 5% F.S. (Full Scale, i.e., rated voltage).



GP-36100, 30V, Transient Response: 10%Pe - 90%Pe (Recov-
ery time ≤2.9ms, voltage drop 680mV)

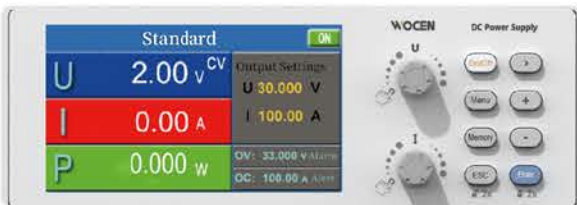
Arbitrary Waveform Generator and Its Applications

This series of power supplies is equipped with a built-in multi-waveform generator, allowing users to easily implement single or combined outputs of waveforms such as triangle, rectangle, trapezoid, sine, and step, which can be applied to either the output voltage or current. It provides users with powerful programmable testing capabilities.



LCD Display & Knob & Button Operation

Featuring a 4.3-inch LCD screen, the power supply allows users to adjust output parameters via knobs and buttons. With a user-friendly human-machine interface, it offers excellent operability.



⚡ Product Selection Guide

Model	Voltage	Current	Power	Dimensions (W*H*D)mm
GP-36100	36V	100A	3kW	2U (446*87*380)
GP-3650	36V	50A	1.5kW	2U (446*87*380)
GP-6060	60V	60A	3kW	2U (446*87*380)
GP-6030	60V	30A	1.5kW	2U (446*87*380)
GP-12030	120V	30A	3kW	2U (446*87*380)
GP-12015	120V	15A	1.5kW	2U (446*87*380)
GP-30012	300V	12A	3kW	2U (446*87*380)
GP-3006	300V	6A	1.5kW	2U (446*87*380)
GP-4008	400V	8A	3kW	2U (446*87*380)
GP-4004	400V	4A	1.5kW	2U (446*87*380)

⚡ Technical Specifications

Input	Phase	Single-phase + PE
	Voltage	220V ± 22V
	Frequency	47-63Hz
Output	Voltage	Full-range adjustable
	Current	Full-range adjustable
	Power	Fixed
Setting Error (Programming Accuracy)	Voltage	≤0.1%U _{max}
	Current	≤0.2%I _{max}
Measurement Error (Readback Accuracy)	Voltage	≤0.1%U _{max}
	Current	≤0.2%I _{max}
Load Effect	Voltage	≤0.1%U _{max}
	Current	≤0.2%I _{max}
Source Effect	Voltage	≤0.05%U _{max}
	Current	≤0.1%I _{max}
Transient Response Time		≤5ms
Rise Time (100%)		50ms (10%-90%)
Temperature Coefficient	Voltage	100ppm
	Current	100ppm
Noise		≤55dB (A)
OV Range		110%F.S.
Communication		Standard: RS485/RS232, LAN, CAN, Protocols: MODBUS-RTU, MODBUS-TCP, CAN2.0B. Other ports customizable.
Protection Functions		Over-temperature, over-voltage, under-voltage, over-current, compensation terminal reverse polarity protection
Analog Interface (Optional)		Start/stop/alarm, 0-5V or 0-10V analog control output
Efficiency		≥85%
Operating Temperature		0~40℃

GP Series (10-400kW)

DC Regulated Power Supply

The GP Series DC regulated power supplies feature a visual human-machine interface (HMI) that offers easy operation, an user-friendly interface, and rich information display. They are widely applicable across various industries, including new energy motor and electric control, electronic components for electric power, universities and colleges, testing institutions, hydrogen energy, sewage treatment, and home appliances. With a rich product model range and strong technical capabilities, the GP Series supports custom design of any single unit with power ranging from 10kW to 400kW.



Product Application

- 

Electric Vehicle Motor Testing
Electric Vehicle Motor Controller Testing
- 

Electric Vehicle Powertrain Testing
- 

Electric Vehicle Complete Vehicle Testing
- 

Hydrogen
- 

Electronic Component
- 

Sewage Treatment
- 

Testing Institution
- 

Colleges and Universities

Features

- Equipped with multi-stage filter circuits to reduce harmonic interference to the grid.
- Isolated output circuit ensures operational safety.
- Full-range adjustable output voltage and current for convenient customer testing.
- Large-size touchscreen HMI for easy operation.
- Line voltage drop compensation function automatically compensates for voltage drops in load connection cables.
- Dual closed-loop control circuit delivers fast response and stable output.
- Adopts full-bridge phase-shift soft-switching technology, achieving overall efficiency above 90%.
- Equipped with remote communication interfaces supporting the MODBUS-RTU protocol.
- Comprehensive protection measures enable unattended operation during power supply runtime.
- The GP Series power supply is matched with a discharge device to timely dissipate regenerative energy from motors, protecting both the power supply and the controller.

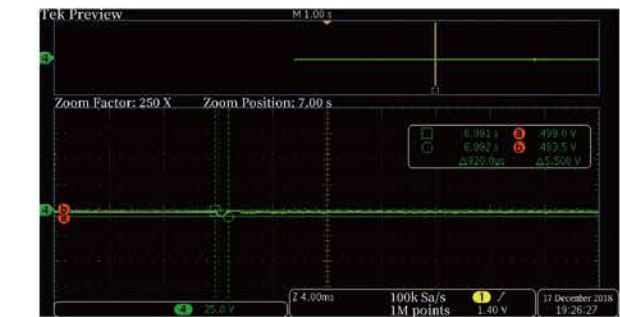
Large-size Touchscreen Operation & Display

Featuring a 7-inch touchscreen display, the power supply allows users to preset output parameters directly via a virtual keypad. The human-machine interface is convenient and highly operable.



Transient Characteristics

The GP Series DC regulated test power supplies adopt a dual closed-loop control circuit, delivering fast response speed and stable output. For load changes from 10% to 90% and 0% to 50%, the transient response time is less than 5ms, and the voltage variation is less than 5% F.S. (Full Scale, i.e., rated voltage).



GP-060-600, 600V, Transient Response: 10%Pe – 90%Pe (Recovery time: 920μs, voltage drop: 5.5V)

External Interfaces

The power supply is equipped with rich communication interfaces, including RS485 as standard, and RS232 and Ethernet ports as optional. For digital/analog interfaces, it comes standard with external interfaces for emergency stop, start/stop, fault detection, and running status detection. Optional 0–5V/4–20mA analog signals are available to control the output voltage and current of the power supply.

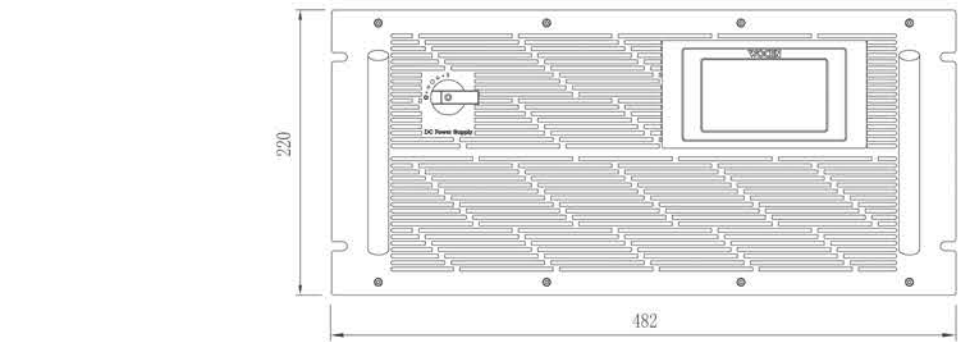
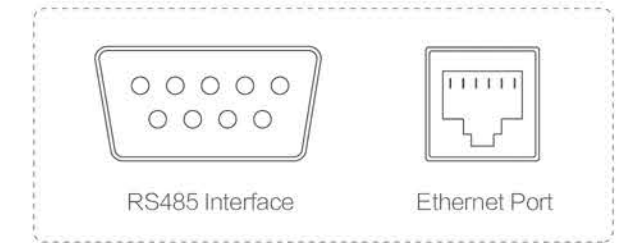


Figure 1-10 Power supply dimensions

Figure 1-11 Power supply front panel

Figure 1-12 Power supply rear panel

Figure 1-13 Power supply top view

Figure 1-14 Power supply bottom view

Figure 1-15 Power supply side view

Figure 1-16 Power supply front panel details

Figure 1-17 Power supply rear panel details

Figure 1-18 Power supply top view details

Figure 1-19 Power supply bottom view details

Figure 1-20 Power supply side view details

Figure 1-21 Power supply front panel details

Figure 1-22 Power supply rear panel details

Figure 1-23 Power supply top view details

Figure 1-24 Power supply bottom view details

Figure 1-25 Power supply side view details

Figure 1-26 Power supply front panel details

Figure 1-27 Power supply rear panel details

Figure 1-28 Power supply top view details

Figure 1-29 Power supply bottom view details

Figure 1-30 Power supply side view details

Figure 1-31 Power supply front panel details

Figure 1-32 Power supply rear panel details

Figure 1-33 Power supply top view details

Figure 1-34 Power supply bottom view details

Figure 1-35 Power supply side view details

Figure 1-36 Power supply front panel details

Figure 1-37 Power supply rear panel details

Figure 1-38 Power supply top view details

Figure 1-39 Power supply bottom view details

Figure 1-40 Power supply side view details

Figure 1-41 Power supply front panel details

Figure 1-42 Power supply rear panel details

Figure 1-43 Power supply top view details

Figure 1-44 Power supply bottom view details

Figure 1-45 Power supply side view details

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Figure 1-247 Power supply rear panel details

Figure 1-248 Power supply top view details

Figure 1-249 Power supply bottom view details

Figure 1-250 Power supply side view details

Figure 1-251 Power supply front panel details

⚡ Technical Specifications

AC Characteristics	Input Method	Three-phase four-wire + PE
	Voltage	380V±10%
	Frequency	50Hz±5Hz
DC Characteristics	Display Accuracy	≤0.5%F.S.
	Output Accuracy	≤0.5%F.S.
	Source Effect	≤0.2%F.S.
	Load Effect	≤0.2%F.S.
	Ripple (Vrms)	≤0.5%F.S.
	Response Time	≤10ms (10%~90% step load)
Protection Functions		Output overcurrent protection, output overvoltage protection, output compensation reverse polarity protection, output over-compensation protection, power unit overheating protection, output short-circuit protection
Communication Interfaces		RS485 (standard), RS232 (optional), Ethernet port (optional)
Safety Characteristics	Insulation Resistance	≥20MΩ
	Withstand Voltage	2000Vdc test for 60S, no flashover or breakdown.
	Earth Resistance	≤100mΩ
Noise		≤65dB
Protection Class		IP20
Cooling Method		Forced air cooling
Operating Environment	Ambient Temperature	0℃~40℃
	Ambient Humidity	10%~90% (non-condensing)
	Altitude	≤2000m

WA SERIES

Regenerative Grid Simulator

The WA Series Regenerative Grid Simulator is a programmable regenerative AC power source developed based on the 3rd-generation SiC technology, featuring AC/DC four-quadrant operation capability. It can operate as an AC power source to meet general grid compliance test requirements, outputting stable voltage and frequency, and providing voltage variation, frequency variation, and phase variation. It supports the simulation of various power quality conditions including harmonics, three-phase unbalance, voltage sag, and flicker. Meanwhile, it can absorb energy regenerated by the load and feed it back to the grid, with a regeneration efficiency of up to 91%. It is a bidirectional power supply with high precision, high dynamics, high standards, and full-featured grid characteristic simulation.



⚡ Features

- › Integrated AC source & load, bidirectional power flow and seamless switching over full power range.
- › High power density: up to 21 kVA in 3U.
- › High-efficiency energy regeneration.
- › Adopts silicon carbide (SiC) technology.
- › Supports master-slave parallel operation.
- › Touchscreen design with simple and intuitive UI.
- › Built-in extensive waveform library.
- › Phase angle adjustable from 0° to 360°.
- › Harmonic simulation and analysis up to 50th order.
- › Complies with grid code testing including LVRT, phase jump, frequency variation, harmonic injection, etc.
- › Comprehensive protection functions.

Product Application



OBC/BOBC



EV Charger / Charging Module



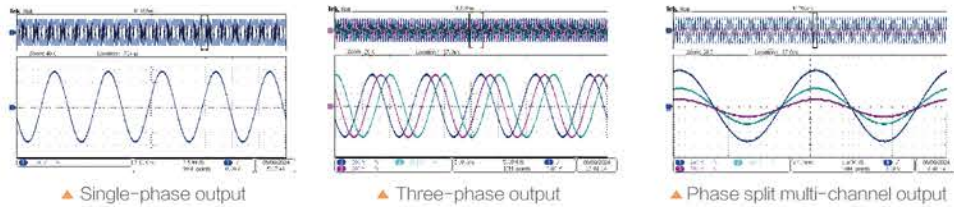
PV Inverter



Energy Storage System (ESS)

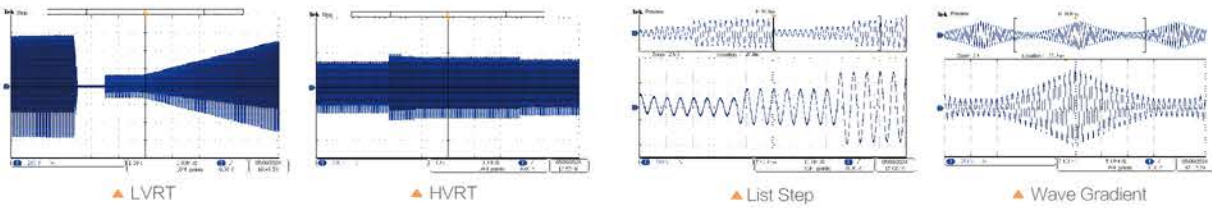
Multi-phase output

It has multi-phase output capability, and can choose from three modes: single-phase, split-phase, and three-phase. In single-phase mode, it can provide high current, and in split-phase/three-phase mode, it can provide low current, and can simulate three-phase imbalance, phase loss, etc. In split-phase mode, it can test up to 3 devices under test at the same time, improving equipment utilization, saving space and cost.



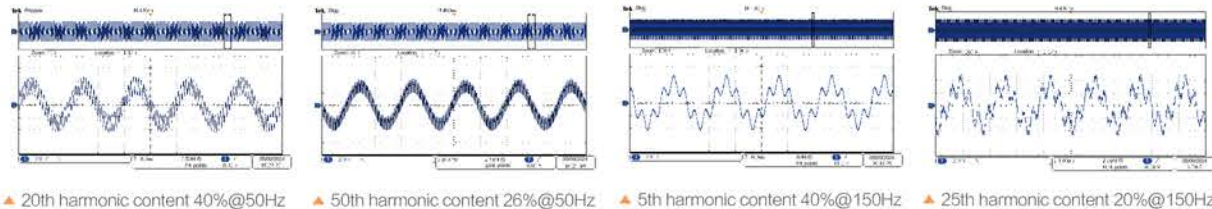
Programming function

It has the function of generating arbitrary waveforms. It can use functions such as LIST and WAVE to simulate various working conditions of the power grid through simple step settings, such as voltage sag, voltage rise, voltage fluctuation, power frequency change, etc., to verify the power grid adaptability and high and low voltage ride-through capabilities of the equipment under test.



Harmonic injection

It has the function of simulating real power grid harmonics. Through simple parameter settings, it can simulate up to 50 power grid harmonics, with a maximum harmonic content of 40%, meeting the test requirements of IEC61000-4-13, GB/T 17626.13 and other standards for equipment EMC immunity.



Measurement function

Based on high-precision sampling system and advanced DSP technology, it can measure each phase voltage, current, active/reactive power, power factor, etc. in real time, and can display up to 50 harmonic data. Each harmonic data is displayed in the form of numbers and charts, which is convenient for users to conduct simple analysis of real-time working conditions when other power analysis instruments are lacking.

Technical Parameters

Specifications and Models			WA121-450-105	
Rated Power			21kVA	
Three-Phase Maximum Current			35 A _{rms}	
Single-Phase Maximum Current			105 A _{rms}	
Output Parameters (Source Mode)	Voltage	Scope	0~450 V _{rms} (L-N)	
		Resolution	0.01V	
		Accuracy	±0.1%F.S.	
		Voltage Distortion	≤0.5%@50Hz/60Hz	
			≤1%@15Hz ~ 200Hz	
		Load Regulation	±0.1%F.S.	
	Source Regulation Rate		±0.1%F.S. @10% change	
		Frequency	Scope	15 ~ 200Hz
			Resolution	0.01Hz
	Accuracy		±0.01%F.S.	
	Phase	Scope	0° ~359.9°	
		Resolution	0.1°	
		Accuracy	±0.1°	
	Harmonic	Maximum Times	50 times @ 50Hz/60Hz	
Phase Angle Range		0° ~359.9°		
Load Parameters (Load Mode)	Input Voltage		30~450V _{rms}	
	Frequency Range		30 ~ 100Hz	
Input Parameters	Connection Method		Three-phase three-wire + PE	
	Frequency		47 ~63Hz	
	Voltage Range		(380~480V) ±10%	
Other Parameters	Common Interface		Type-B USB、LAN、CAN	
	Protection Level		IP21	
	Cooling Method		Forced Air Cooling	
	Structural Dimensions (W*H*D)		485mm*132.5mm*770mm	

Specification and Models

Model	Voltage	Current	Power	Size
WA-006-450-105	450V	105A	6 kVA	3U
WA-009-450-105	450V	105A	9 kVA	3U
WA-012-450-105	450V	105A	12 kVA	3U
WA-015-450-105	450V	105A	15 kVA	3U
WA-018-450-105	450V	105A	18 kVA	3U
WA-020-450-105	450V	105A	20 kVA	3U

BP7 Series

Variable Frequency Power Supply

The BP7 Series variable frequency power supply is a high-performance device that can simulate the voltage and frequency of power grids worldwide. It is suitable for R&D and production testing in industries such as home appliances, motors, power tools, and aerospace.

The BP7 Series features ultra-low output voltage THD%, 3x overload capacity, and list programming functionality. It is equipped with a visual touchscreen HMI for easy operation and rich information display. Optional remote communication interfaces including RS232, RS485, and Ethernet are available to enable real-time monitoring of the power supply's operating status.



Product Application



Home Appliances



Electric Motors



Electric Tools



Import and Export Equipment



LED



Compressor



Scientific Research Institutions



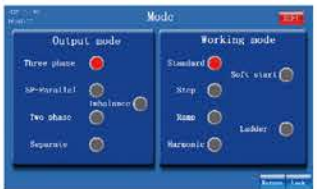
Avionics

Features

- 7-inch true-color touchscreen for easy operation.
- Up to 3x overload capacity, significantly reducing the required power supply capacity for motor loads.
- Voltage waveform distortion as low as 1%, delivering superior waveform quality.
- Standard programming function to fully realize programmable variable frequency power supply capabilities.
- Standard soft-start function to effectively solve the problem of excessive motor starting current.
- RS232 interface as standard, with optional RS485 and Ethernet interfaces.
- Automatic fan speed control for lower noise.

Multiple Programming Functions

It offers 3 programming modes: step, ramp, and staircase, fully realizing programmable power supply capabilities to meet regulatory testing requirements. It is especially suitable for cyclic durability testing of home appliances and appliance motors.



Large-size Touchscreen Control

It adopts a 7-inch true-color touchscreen, featuring a large high-definition display window and a user-friendly human-machine interface (HMI).



Exceptional Overload Capacity

It features an overload capacity of up to 3 times the rated value for 2 seconds, allowing a power supply of the same capacity to start higher-power motor loads, which significantly reduces testing costs. Tests have shown that a 60kVA BP7 variable frequency power supply can directly start a 18.5kW motor (with a starting power of 185kW).

Ultra-Low Waveform Distortion

The lower the distortion, the closer the output voltage is to the standard sine wave. When the output phase voltage of the BP7 series variable frequency power supply is within the range of 220V/110V $\pm$ 15%, it can achieve a THDu (Total Harmonic Distortion of Voltage) $\leq$ 1%.



Output Modes (Three-Phase Output Models)

The BP7 series variable frequency power supply (three-phase output models) features 5 output modes, including standard three-phase, parallel single-phase, ANSI two-phase, and three-phase independent phase unbalance. It can simulate various grid conditions, realizing the function of "one machine for multiple uses".

Harmonic Modes (Three-Phase Output Models)

The unit comes with 30 built-in harmonic-superimposed waveforms, enabling it to simulate various harmonic conditions in the power grid.

Single-Phase Output Models

Model	Voltage	Current (Low/High Grade)	Power	Dimensions (WxDxH) mm
BP7010	Single-phase 0-300V	90A/45A	10kVA	470 × 875 × 700
BP7015		136A/68A	15kVA	
BP7020		182A/91A	20kVA	530 × 1010 × 800
BP7030		272A/136A	30kVA	
BP7045		408A/204A	45kVA	600 × 1210 × 900
BP7060		544A/272A	60kVA	

Three-phase output products

Mode	Voltage	Current (low/high)	Power	Size (W*H*D) mm
BP7315	Phase voltage 0~300V Line voltage 0~520V	45A/22.5A	15kVA	600 × 1135 × 1010
BP7330		90A/45A	30kVA	
BP7345		136A/68A	45kVA	
BP7360		182A/91A	60kVA	700 × 1385 × 1240
BP7390		272A/136A	90kVA	
BP73120		362A/181A	120kVA	750 × 1445 × 1385
BP73150		454A/227A	150kVA	
BP73180		545A/272A	180kVA	800 × 1845 × 1450
BP73240		724A/362A	240kVA	
BP73300		908A/454A	300kVA	

Technical Parameters

Input frequency		50Hz/60Hz ± 5%
Output	Output mode	Three-phase standard mode, parallel single-phase mode, American standard two-phase mode, three-phase independent mode, three-phase unbalanced mode
	Output voltage	Phase voltage: Low range: 0-150V, High range: 0-300V
	Range	± (0.2% of reading + 0.2% of full scale)
	Error	
Output	Output frequency	40-70Hz adjustable, fixed points at 100Hz, 120Hz, 200Hz, 240Hz
	Frequency stability	< ± 0.1%
	Transient recovery time	≤ 20ms
	Source effect/load effect	≤ 1%
Waveform distortion		< 1% (High/low range voltage: 220V/110V ± 15%, resistive load)
Overload capacity		100% ~110% for 5min; 110% ~150% for 1min; 150% ~200% for 5S; 200% ~300% for 2S; ≥300% immediate output shutdown
Protection function		Automatic protection and alarm display for overvoltage, overcurrent, overload, overtemperature and short circuit
Display	Display mode	7-inch touch screen display
	Output voltage	Resolution: 0.1V; Display accuracy: ± (0.2% of reading + 0.2% of full scale)
	Output current	Resolution: 0.01A; Display accuracy: ± (0.3% of reading + 0.3% of full scale)
	Output frequency	Resolution: 0.1Hz; Display accuracy: ± 0.1%
	Output power	Resolution: 0.01kW; Display accuracy: ± (0.45% of reading + 0.45% of full scale)
Features	Shortcut Settings	10 sets of voltage/frequency presets with customizable settings
	Programming function	Step mode, ramp mode, step-ramp mode
	Soft start function	Configurable initial voltage, operating voltage and rise time; rise time adjustable from 1~99S
	Communication function	Standard RS232; optional RS485 and Ethernet communication
	Resistance compensation	0.000~0.500Ω
Security	Insulation impedance	≥ DC500V, 10MΩ
	Voltage insulation	DC2100V, 10mA, 60S
Cooling mode		Forced air cooling
Environment	Operating temperature	0~40℃
	Relative humidity	0~90% (non-condensing)
	Altitude	< 1500m (altitude)

BP6 Series
Variable Frequency Power Supply

The BP6 Series Variable Frequency Power Supply is a cost-effective AC power source capable of simulating voltage/frequency conditions of power grids worldwide. It is ideal for R&D testing and production testing in industries such as home appliances, motors, and power tools.

The BP6 Series Variable Frequency Power Supply features ultra-low output voltage distortion, dual-mode control via buttons/knobs, and configurable output current protection thresholds. It offers intuitive operation and comprehensive information display. Additionally, optional remote communication interfaces such as RS232, RS485, and Ethernet are available to enable real-time monitoring of the power supply's operating status.



Product Application



Home Appliances



Electric Motors



Electric Tools



Scientific Research
Institutions



Import and Export
Equipment



LED



Compressor



Avionics

⚡ Features

BP60 Series

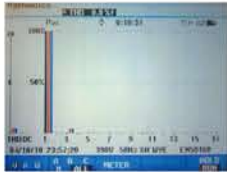
- Button + knob operation for easy control.
- Voltage waveform distortion as low as 1% for superior waveform quality.
- Customizable output current protection threshold for enhanced load safety.
- Automatic line voltage drop compensation.
- Key lock function to prevent accidental operation.
- Compact size to save space.
- Standard RS232 interface, optional RS485 and Ethernet interfaces.

BP63 Series

- 7-inch true-color touch screen for intuitive operation.
- Overload capacity up to 3 times, greatly reducing the required power capacity for motor loads.
- Voltage waveform distortion as low as 1% for superior waveform quality.
- Standard programming function to realize true program-mable variable frequency power supply.
- Standard soft- start function to effectively solve the problem of excessive motor starting current.
- Standard RS232 interface, optional RS485 and Ethernet interfaces.
- Automatic fan speed control for lower noise.

⚡ Ultra-low Waveform Distortion

The lower the distortion, the closer the output voltage is to a standard sine wave. When the output phase voltage of the BP6 Series Variable Frequency Power Supply is 220V/110V ± 15%, it can achieve THDu ≤ 1%.

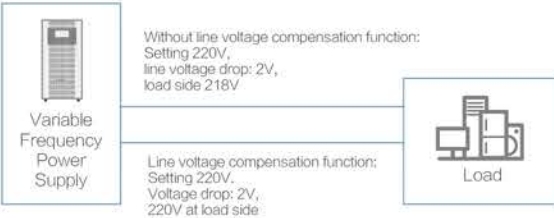


⚡ Customizable Output Current Protection Threshold

Users can customize the output current protection threshold. The power supply will quickly cut off the output when the load current exceeds the set value, effectively protecting the load.

⚡ Line Voltage Drop Compensation Function

Equipped with line voltage drop compensation function: When the cable between the variable frequency power supply and the load is long, it can automatically adjust the voltage at the load end to keep the load end voltage consistent with the set voltage value.



⚡ Key Lock Function

Equipped with a key lock function, it automatically locks the buttons and knobs after 5 minutes of inactivity, effectively preventing accidental operation by users.

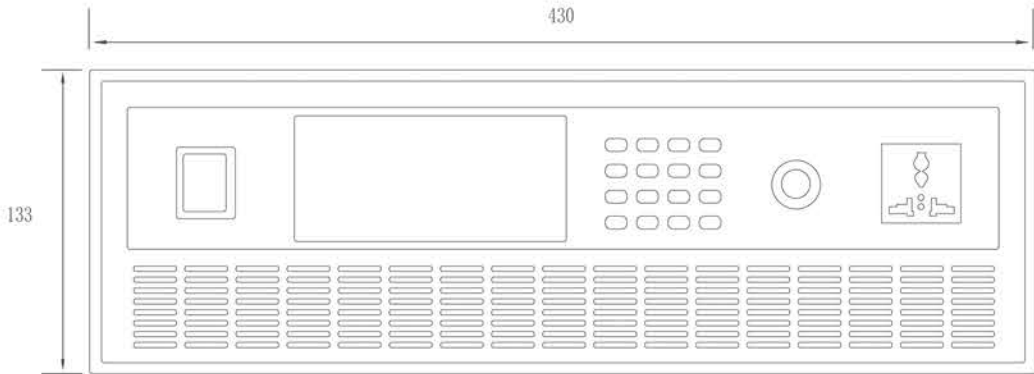
⚡ Single-phase output product

Note: For products below 10kVA, the input is single-phase 220V ± 10%; for products above 15kVA, the input is three-phase 380V ± 10%.

Model	Voltage	Current (Low/High)	Power	Size (W*H*D) mm
BP6605	Monophase 0–300V	4.5A/2.25A	500VA	430 × 133 × 380
BP6001		9A/4.5A	1kVA	
BP6002		18A/9A	2kVA	430 × 133 × 440
BP6003		27A/13.5A	3kVA	
BP6005		45A/22.5A	5kVA	350 × 635 × 530
BP6010		90A/45A	10kVA	
BP6015		136A/68A	15kVA	470 × 875 × 700
BP6020		182A/91A	20kVA	
BP6030		272A/136A	30kVA	530 × 1010 × 800
BP6045		408A/204A	45kVA	
BP6060		544A/272A	60kVA	600 × 1210 × 900

⚡ Three-phase output products

Model	Voltage	Current (Low/High)	Power	Size (W*H*D) mm
BP6315	Phase voltage 0–300V Line voltage 0–520V	45A/22.5A	15kVA	600 × 1135 × 1010
BP6330		90A/45A	30kVA	
BP6345		136A/68A	45kVA	700 × 1385 × 1240
BP6360		182A/91A	60kVA	
BP6390		272A/136A	90kVA	750 × 1445 × 1385
BP63120		362A/181A	120kVA	
BP63150		454A/227A	150kVA	800 × 1845 × 1450
BP63180		544A/272A	180kVA	



⚡ Technical Parameters

Input frequency			50Hz/60Hz ± 5%
Output	Output voltage	Range	Phase Voltage: Low Range: 0-150V, High Range: 0-300V
		Error	± (0.2%+0.2%F.S.)
	Output frequency		40-70Hz Adjustable
Frequency stability			< ±0.1%
Transient recovery time			≤20ms
Source effect/load effect			≤1%
Waveform distortion			<1% (High/Low Range Voltage: 220V/110V ± 15%, Resistive Load)
Overload capacity			100%-110% for 30s; 110%-120% for 10s; >120% Immediate Output Shutdown (Single-phase Output Models) 100%-110% for 5min; 110%-150% for 1min; 150%-200% for 5s; 200%-300% for 2s; ≥300% Immediate Output Shutdown
Protection function			Automatic Protection & Alarm Display for Overvoltage, Overcurrent, Overload, Overtemperature and Short Circuit
Display	Display mode		LED Display (Single-phase Output Models) / 7-inch Touch Screen (Three-phase Output Models)
	Output voltage		Unit: V, Minimum Resolution: 0.1V
	Output current		Unit: A, Minimum Resolution: 0.01A
	Output frequency		Unit: Hz, Minimum Resolution: 0.1Hz
	Output power		Unit: W/kW, Minimum Resolution: 1W /0.01kW
Features	Protection current		Customizable Output Current Protection Threshold
	Communication function		Optional RS485, RS232, LAN Communication Interfaces
	Step programming		50 Programmable Voltage/Frequency Groups, Each Group's Running Time Adjustable up to 99H:59M:59S, Up to 60000 Cycles (Three-phase Output Models)
	Resistance compensation		0.000-0.500Ω
Security	Insulation impedance		≥ DC500V, 10MΩ
	Voltage insulation		DC2100V, 10mA, 60s
Cooling mode			Forced Air Cooling
Environment	Operating temperature		0~40℃
	Relative humidity		0~90% (Non-condensing)
	Altitude		< 1500m (Altitude)

BPA Series

High-Power AC Test Power Supply



The BPA Series Variable Frequency Power Supply is a high-power variable frequency power supply equipment specially designed and manufactured by our company for industrial environments such as charging pile testing. It adopts a highly reliable modular design architecture, with a maximum power capacity of up to 3000kVA based on our current technical capabilities.

The BPA Series Variable Frequency Power Supply features comprehensive system protection functions, including short circuit, overcurrent, overheating, overload, undervoltage, overvoltage, and phase loss protection. It also offers advantages such as high reliability, fast dynamic response, user-friendly human-machine interface, high measurement accuracy, strong load capacity, and excellent stability.

Product Application



Charging Pile



Central Air-conditioning



Air Compressor



Motor

⚡ Features

- › Full digital closed-loop function with high precision.
- › Grouped modular design for easy maintenance and high reliability.
- › Optical fiber connection for high speed and stability.
- › Low waveform distortion.

⚡ Specifications and Models

Model	Voltage	Current (Low/High)	Power	Size (W*H*D) mm
BPA-300	Phase voltage 0-300V Line voltage 0-520V	435A	300kVA	1700 × 1900 × 1050
BPA-400		579A	400kVA	2300 × 2000 × 1050
BPA-600		869A	600kVA	3200 × 1900 × 1050
BPA-800		1159A	800kVA	4500 × 1900 × 1200
BPA-1000		1450A	1000kVA	5000 × 1900 × 1200
BPA-1200		1739A	1200kVA	6500 × 1900 × 1200

AP SERIES

Shore Power Supply



Wocen AP Series Shore Power Supply is a high-power variable-frequency power supply equipment specially designed and manufactured by our company according to the needs of port and ship customers, for the harsh operating environments such as high temperature, high humidity, high corrosion and heavy load impact in port shipbuilding. It is mainly applied in port terminals and shipbuilding. Input: 6~10kV/50Hz or 380V/50Hz, Output: 440V/60Hz. After the ship is docked, the on-board generator is switched to shore-based power supply. The existing technical capability can achieve a maximum power of 5000kVA.

Product Application



- Shipbuilding and repairing industry;
- Shoreside container cranes, gantry cranes, ship loaders, ship unloaders, tippers, and other types of port machinery;
- Large-tonnage (over 40 tons) bridge cranes, gantry cranes, and other types of lifting machinery;
- Testing of motors such as submersible pumps and air compressors; Debugging of offshore oil platforms;

Typical Applications



Features

- > DSP pure digital control, excellent waveform quality and dynamic characteristics.
- > Unique line voltage compensation function, solving the problem of large line voltage drop when the load is far away.
- > Modular design with multi-module parallel operation, supporting hot withdrawal of faulty modules and partial module operation under low load, ensuring stable, reliable, economical and energy-efficient performance.
- > Abundant and customizable optional accessories such as containers, cable reels, trolleys, etc.

Specification and Models

Model	AP-200	AP-400	AP-600	AP-800	AP-1000	AP-1600	AP-2000	AP-2500	AP-3000
Rated power	200kW	400kW	600kW	800kW	1000kW	1600kW	2000kW	2500kW	3000kW
Peak power	300kW	600kW	900kW	1200kW	1500kW	2400kW	3000kW	3750kW	4500kW
Rated current	240A	480A	720A	960A	1200A	1900A	2400A	3000A	3600A
Peak current	360A	720A	1080A	1440A	1800A	2850A	3600A	4500A	5400A

EVWR SERIES

Regenerative electronic load

The EVWR series regenerative electronic load is specially developed for fuel cell engine testing, fuel cell DCDC testing, charging pile aging testing and other applications. It is developed by adopting core technologies such as four-quadrant PWM rectification, bidirectional BUCK conversion and pure digital control. It features 100% energy feedback, high precision, fast transient characteristics, high conversion efficiency, low grid pollution, rich communication interfaces and powerful protection functions.



Product Application



Fuel Cell System Testing



Fuel Cell DCDC Test



Electric Vehicle Generator Testing



Electric Vehicle DCDC Test



Charging Pile Test

Features

- Adopts four-quadrant control technology, enabling bidirectional energy flow within full power range, featuring stable and reliable operation as well as energy-saving and high efficiency.
- Equipped with constant resistance, constant voltage, constant current and constant power multiple operating modes.
- Fast transient response.
- Adopts high-speed digital control technology, with output accuracy reaching 0.1%.
- Adopts PWM rectification technology, power factor >0.99, input harmonic <3%, efficiency >93%.
- Features automatic voltage drop compensation function to automatically compensate line voltage drop.
- Equipped with 10-inch touch screen for convenient operation and display.
- Output parameters and protection parameters are programmable, suitable for different types of equipment testing.
- Internal components adopt international brands such as LEM and Infineon, ensuring high device reliability.
- Adopts modular design for convenient later maintenance of the device.

Fast Transient Response

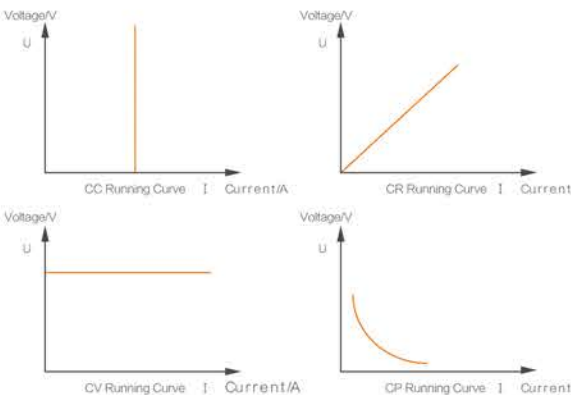
The EVWR series regenerative electronic load features fast current dynamic response, which can meet the precision requirements of various working conditions during discharge testing and prevent the impact of load response defects on testing results.



Current change rate: 50A/s, with current reduced from ~155A to 0A.

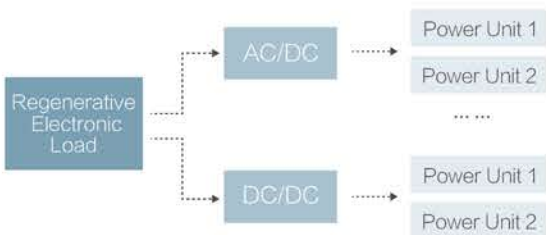
CR/CV/CC/CP Working Mode

The EVWR series regenerative electronic load features two operating modes: power supply and load. When used as a power supply, it supports CV/CC/CP operating modes; when operated as a load, it can select CC/CV/CP/CR operating modes.



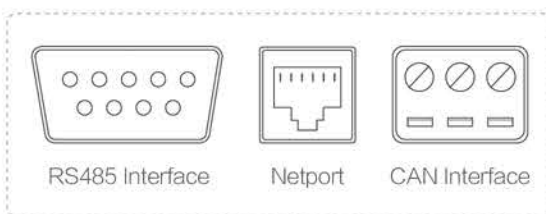
Modular Design

The EVWR series regenerative electronic load adopts standardized designed module units. The modular design components feature high reliability, enabling convenient and fast installation and maintenance.



Diversified Communication Interface Design

The EVWR series regenerative electronic load provides multiple communication interfaces, with RS485 and CAN interfaces as standard, and Ethernet available as an option.



Specification and Models

Model number	Rated power	Voltage range	Rated current
EVWR-060-600-600	60kW	10~600V	600A
EVWR-060-600-800		10~600V	800A
EVWR-060-600-1000		10~600V	1000A
EVWR-060-1000-600		10~1000V	600A
EVWR-060-1000-800		10~1000V	800A
EVWR-060-1000-1000		10~1000V	1000A
EVWR-080-800-600	80kW	10~800V	600A
EVWR-080-800-800		10~800V	800A
EVWR-080-800-1000		10~800V	1000A
EVWR-080-1000-600		10~1000V	600A
EVWR-080-1000-800		10~1000V	800A
EVWR-080-1000-1000		10~1000V	1000A
EVWR-100-800-600	100kW	10~800V	600A
EVWR-100-800-800		10~800V	800A
EVWR-100-800-1000		10~800V	1000A
EVWR-100-1000-600		10~1000V	600A
EVWR-100-1000-800		10~1000V	800A
EVWR-100-1000-1000		10~1000V	1000A
EVWR-120-800-600	120kW	10~800V	600A
EVWR-120-800-800		10~800V	800A
EVWR-120-800-1000		10~800V	1000A
EVWR-120-1000-600	120kW	10~1000V	600A
EVWR-120-1000-800		10~1000V	800A
EVWR-120-1000-1000		10~1000V	1000A
EVWR-150-800-600	150kW	10~800V	600A
EVWR-150-800-800		10~800V	800A
EVWR-150-800-1000		10~800V	1000A
EVWR-150-1000-600		10~1000V	600A
EVWR-150-1000-800		10~1000V	800A
EVWR-150-1000-1000		10~1000V	1000A
EVWR-200-800-600	200kW	10~800V	600A
EVWR-200-800-800		10~800V	800A
EVWR-200-800-1000		10~800V	1000A
EVWR-200-1000-600		10~1000V	600A
EVWR-200-1000-800		10~1000V	800A
EVWR-200-1000-1000		10~1000V	1000A
EVWR-250-800-600	250kW	10~800V	600A
EVWR-250-800-800		10~800V	800A
EVWR-250-800-1000		10~800V	1000A
EVWR-250-1000-600		10~1000V	600A
EVWR-250-1000-800		10~1000V	800A
EVWR-250-1000-1000		10~1000V	1000A

* Note: The maximum power of a single unit is 600kW, the maximum current of a single unit is 1500A, parallel operation is supported, and master-slave control is supported.

Technical Parameters

Working mode		Constant Voltage, Constant Current, Constant Power, Constant Resistance
Voltage accuracy		≤0.1% F.S.
Voltage resolution		0.01V
Current accuracy		≤0.1% F.S.
Current resolution		0.01A
Current ripple		≤0.1% F.S.
Power resolution		0.01kW
Response time		≤10ms (10%~90% sudden load)
AC characteristic	Output AC voltage	Three-phase three-wire + PE, 380Vac ±10%
	Output frequency	50Hz ±5Hz
	Feedback function	Full power range energy feedback
	Current distortion	<3%
	Power factor	≥0.99
Communication and operation	Overall efficiency	≥93%
	Man-computer interface	Touch screen
	Communication interface	RS485 (standard), CAN2.0 (standard), Ethernet (optional)
Protection	Communication response speed	10ms
		DC overvoltage/overcurrent/overpower, AC phase loss/overvoltage/overcurrent/overpower, IGBT/magnetic device overtemperature
Security features	Insulation resistance	≥20MΩ
	Voltage resistance	2000Vdc test for 60s, no arcing, no breakdown
	Ground resistance	≤100mΩ
Working environment	Protection Class	IP21 (indoor)
	Ambient temperature	-10° C ~45° C
	Ambient humidity	10~90% (no condensation)
	Altitude	≤2000m

WBTS Series

Power Battery PACK Test System



The WBTS series test system is specially developed for charging, discharging, working condition simulation and other tests of power battery packs. Developed with core technologies such as four-quadrant PWM rectification, bidirectional BUCK conversion, and pure digital control, it features bidirectional energy flow, 100% energy feedback, high precision, fast transient characteristics, high conversion efficiency, low grid pollution, rich communication interfaces, and powerful protection functions.

It can realize AC-DC conversion to charge the power grid into the battery module, and can also feed back the power discharged from the battery module to the power grid in the form of grid-connected inverter, so that this part of electric energy can be recycled. This equipment is an energy feedback type bidirectional battery charging and discharging power processing system controlled by computer background software.

Product Application



- Battery module production testing for battery manufacturers.
- EV/HEV power battery system high current charge and discharge testing.
- Battery simulation testing for actual road conditions.
- Research institutions conduct high current charge and discharge testing, battery performance testing, etc., on battery modules.
- Daily battery module maintenance for battery factories and charging stations.
- Research, production, and application testing of electric vehicles.

Features

- Adopts four-quadrant PWM rectification technology with high power factor and low harmonic distortion.
- Power factor >99%, total harmonic distortion <3%, resulting in minimal impact on the power grid.
- Equipped with a high-performance DSP processor to realize complete dual closed-loop feedback control, ensuring safer and more stable operation.
- Independent air duct design improves the device's adaptability to harsh environments.
- Off-grid operation is supported. The device is equipped with a touch screen and storage unit for independent operation.
- Modular design with independent operation of each module, facilitating maintenance and centralized management control.
- Flexible configuration: charging and discharging equipment with different channels and power can be customized according to customer requirements.
- Channels can be used in parallel for convenient expansion, improving production efficiency.
- It can be integrated with other equipment or devices (such as constant temperature boxes, vibration tables, voltage, temperature acquisition systems, etc.).
- The software can conveniently and quickly realize data docking and control with the BMS through the CAN communication protocol (.DBC file) provided by the user.
- Comprehensive functional tests: capacity, cycle life, rate characteristics, HPPC, charging and discharging efficiency, DC internal resistance test, working condition simulation and other performance tests.

Simulation of Actual Working Conditions

The on-vehicle real-world operating condition data can be converted into a simulated and emulated test process, enabling working condition simulation tests on the power battery pack, helping users develop their own unique test conditions.

Specification and Models

Model	Output Voltage	Output Current	Output Power
WBTS-050-1000	Charge and discharge: 24-1000V	-200A~+200A	50kW
WBTS-080-1000		-300A~+300A	80kW
WBTS-160-1000		-500A~+500A	160kW
WBTS-200-1000		-500A~+500A	200kW
WBTS-250-1000		-600A~+600A	250kW
WBTS-300-1000		-600A~+600A	300kW
WBTS-400-1000		-800A~+800A	400kW
WBTS-500-1000		-1000A~+1000A	500kW
WBTS-600-1000		-1200A~+1200A	600kW

*Note:

1) Output voltage can be selected from 24V~800V or 24V~1200V or 48V~1500V.

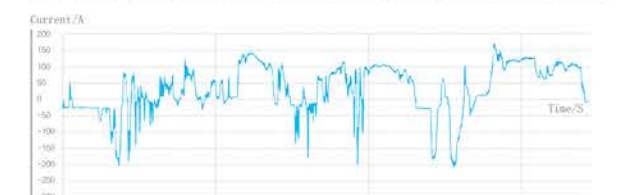
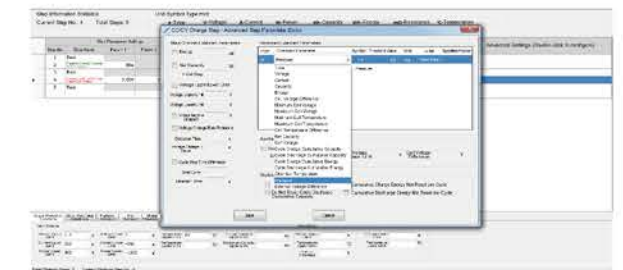
2) The number of output channels, output current and output power can be customized according to customers' requirements.

Powerful Software Functions

Comprehensive test functions and user-friendly step editing interface; supports output functions such as constant current charge/discharge, constant voltage charge, constant resistance discharge, constant power charge/discharge, working condition simulation, fast pulse, DCIR, etc. It can also charge and discharge the battery pack by arbitrarily combining various modes and switch quickly.

It features programmable data input/output, and can display various real-time data of the battery pack (voltage, current, power, energy, capacity, etc.); the charge/discharge process data supports automatic upload, automatic processing, real-time analysis, and is equipped with corresponding process data analysis charts.

Rich and comprehensive recording modes, including detailed data such as cycle layer, step layer, record layer, process documents, channel logs, curves, etc.; arbitrary combination curve display function, allowing users to customize the X-axis and Y-axis, facilitating users to analyze the correlation between various parameters, and optionally quickly export parameter files in Excel format.



Current changes when the vehicle accelerates or decelerates during driving

⚡ Technical Parameters

AC Input		390V ±15%, three-phase three-wire + ground system, 50Hz ±5Hz
		THDi ≤3%, PF >0.99
Output Voltage		Charge/Discharge: 24V~1000V (Note: Customizable 48V~1500V), ≤0.1% F.S.
Voltage Accuracy		±0.05% F.S.
Current Accuracy		±0.05% F.S.
Sampling Resolution		AD: 16bit
Input Resistance		≥1MΩ
Whole Efficiency		93%
Work-step Time Range		≤(365*24) hours per step
Charge/discharge Response Time (10%~90%)		≤10ms
Charge/discharge Conversion Time (-90%~90%)		≤20ms
Charging	Charging Mode	Constant current charge, constant voltage charge, constant power charge, constant current-constant voltage charge
	Cut-off Conditions	Voltage, Current, Time, Capacity
Discharging	Discharging Mode	Constant current discharge, constant power discharge, constant resistance discharge, constant voltage discharge
	Cut-off Conditions	Voltage, Current, Time, Capacity
Loop	Loop Test Range	1~65535 times
	Number of steps in single loop	254 steps
	Nested Loop	With nested cycle function, maximum support for 3-level nesting
Others	Other Functions	Internal resistance test, capacity test, working condition simulation test, support off-line test
Protection	Software Protection	Self-check protection (contactor failure, transformer overtemperature, A/D channel damage, IGBT damage, etc.)
		Configurable safety protection conditions, software overvoltage protection, software undervoltage protection, software overcurrent protection, software undercurrent protection, auxiliary temperature protection, auxiliary voltage protection. The voltage and current protection values can be set simultaneously, and after channel protection, prompts and records can be displayed in the list.
	Hardware Protection	Emergency stop protection, reverse connection protection, short circuit protection, off-grid protection, power-off data protection.
Protection Class		IP21 (Indoor)
Cooling Method		Forced air cooling
Channel Control Mode		Independent control, channels can be paralleled
Noise		<75dB
Databases		Adopt MySQL database to centrally manage test data
Upper Computer Communication Mode		Based on TCP/IP protocol
Data Output Method		EXCEL, TXT, Charts
Human-computer Interaction		Color touch screen / PC
Communications Interface		RS485/LAN/CAN
Operating Temperature		-10℃~45℃
Humidity		<90% (Non-condensing)