

HB SERIES

Bidirectional Programmable DC Test Power Supply

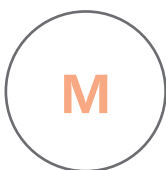
The HB series bidirectional programmable DC test power supply has the characteristics of source and load integration. It can provide a DC power supply for the load and feedback the electric energy to the electrical grid without pollution. It adopts the international standard 3U chassis and provides a 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.



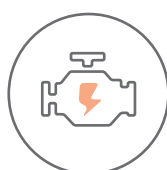
⚡ Features

- › 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



Electric Vehicle Motor Testing
Electric Vehicle Motor
Controller Testing



Electric Vehicle
Powertrain Testing



Electric Vehicle Complete
Vehicle Testing



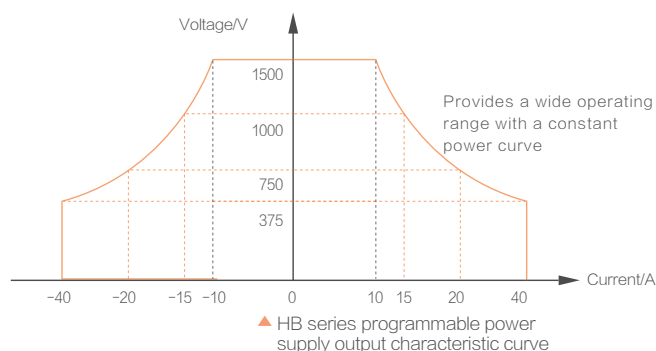
Electric Vehicle
DCDC Test



Hybrid Vehicle
Generator Testing

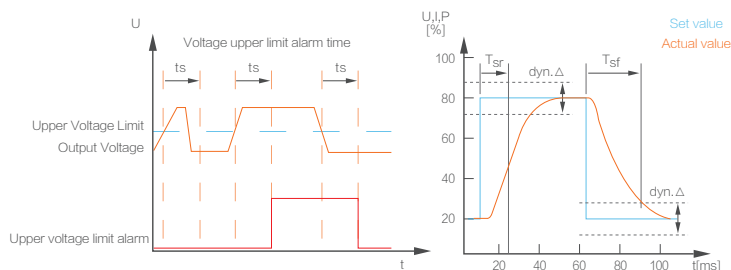
⚡ Auto-ranging wide range output & feed capability

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.



⚡ 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.

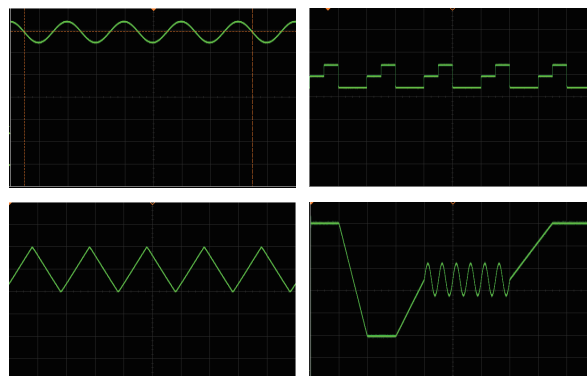


⚡ Fast Dynamic Response

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

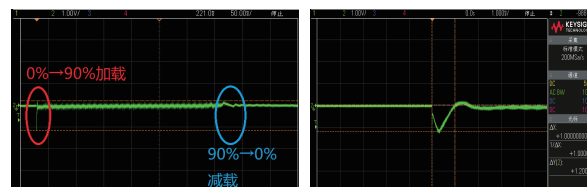
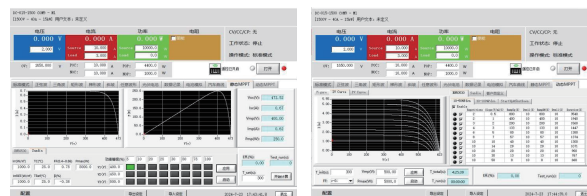
⚡ Powerful Arbitrary Waveform Generator

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.



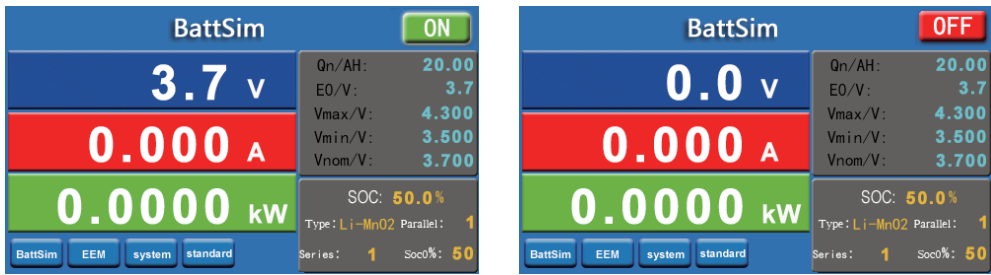
⚡ Photovoltaic simulation function (upper computer)

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!