

OWH67B Series

Single-Channel Bidirectional Programmable DC Power Supply

Key Features

- Source/load integrated architecture, Source mode (CC / CV / CP) Load mode (CC / CV / CR / CP)
- 2U rack-mounted structure, compliant with standard 19-inch cabinet installation
- Bidirectional power architecture, seamless switching between source and load modes
- High-precision output (0.05%), supporting a wide power range up to 60V / $\pm 120A$ / $\pm 1800W$
- Supports battery simulation: built-in 7 high-fidelity battery characteristic models
- Built-in bleed circuit to ensure no residual high voltage at shutdown
- Built-in photovoltaic simulation function, supporting SAS models such as EN50530 and Sandia
- High setting/readback resolution: 10mV/10mA
- Full digital control integrated with OVP, OCP, OPP protection
- Supports USB Device, USB Host, LAN, RS485 communication interfaces, and support SCPI

Product Introduction

The OWH67B series single-channel bidirectional DC power supply is a high-precision laboratory/ industrial-grade instrument designed for **advanced testing, battery simulation, photovoltaic simulation and automation applications**. Delivering up to **60V / $\pm 120A$ / $\pm 1800W$** , it features a source/load integrated architecture and bidirectional power design, realizing seamless switching between different working modes. Key features include:

Source/Load Integrated Architecture: Integrating a DC power supply (CC/CV/CP) and an electronic load (CC/CV/CR/CP), this device fulfills both testing needs in one unit, completely eliminating the need for extra equipment.

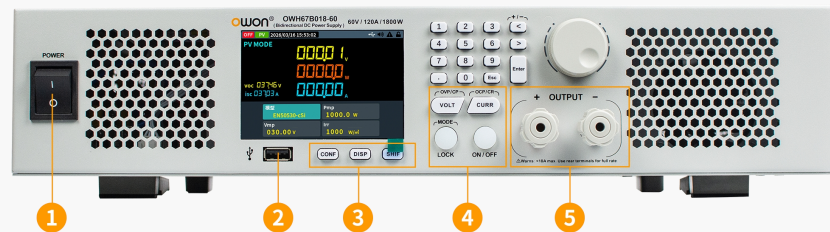
Bidirectional Power & Seamless Switching: Equipped with bidirectional power architecture, supporting seamless switching between source and load modes, ensuring high-speed transition and stable performance without voltage or current overshoot during mode switching.

High Precision & Wide Power Range: Delivers 0.05% output accuracy with a 10mV/10mA setting and readback resolution, ensuring accurate and stable test results.

Built-in Battery Simulation: Features 7 built-in high-fidelity battery characteristic models, which can directly simulate the working characteristics of different batteries, facilitating battery-related testing and research.

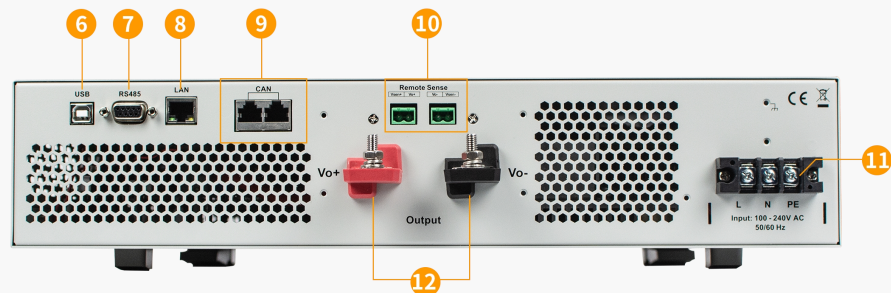
Built-in Photovoltaic Simulation: Integrates standard SAS models (EN50530, Sandia) to precisely simulate PV module I-V curves under varying environmental conditions.

Overview



- 1. Power Switch
- 2. USB data interface
- 3. System Function Keys
- 4. Function Keys
- 5. Output Terminal

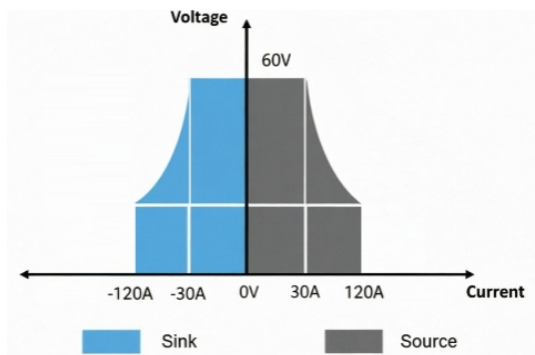
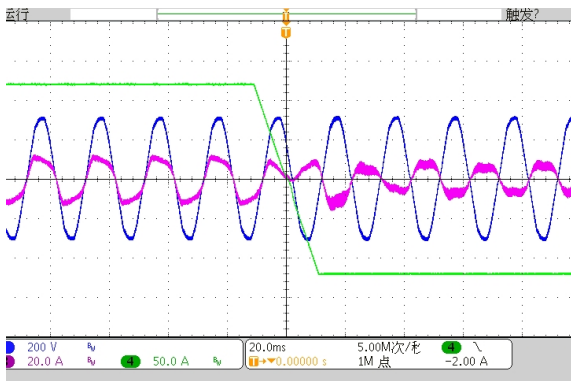
- 6. USB Device Port
- 7. RS-485 Interface
- 8. LAN Interface
- 9. CAN Interface
- 10. Remote Compensation
- 11. AC Power Input Terminal
- 12. DC Output Terminal



A

Automatic Source-Load Seamless Switching

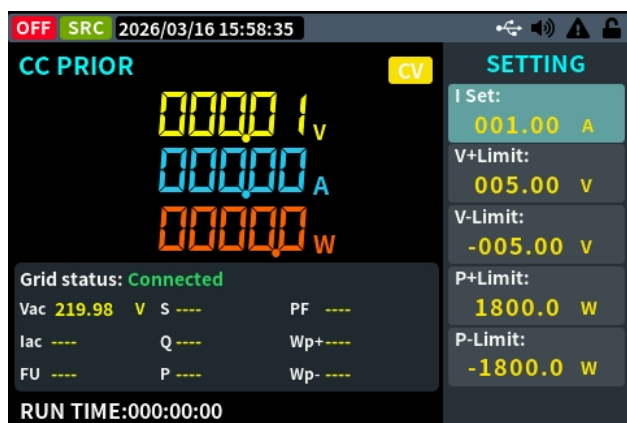
The OWH67B is a high-performance programmable **bidirectional DC power supply** that integrates the functions of both a DC source and a regenerative electronic load. Featuring excellent **two-quadrant operation**, the system supports fast, smooth, and automatic **online seamless switching** between "Source" and "Sink" modes. The transition occurs with zero delay, effectively suppressing voltage or current overshoots to ensure the safety and stability of both the test equipment and the DUT.



B

High-precision voltage / current control

OWH67B series provide a wide output range (60V / $\pm 120\text{A}$ / $\pm 1800\text{W}$), **high-precision** voltage/current control capability, and support power supply with selectable of constant voltage mode, constant current mode and constant power.



C

Regenerative Electronic Load

The OWH67B Series features a **regenerative electronic load** supporting four core operating modes: **CC, CV, CR, and CP**. With a high energy recovery efficiency of up to **89% +**, this series effectively handles complex power testing challenges while significantly reducing laboratory heat emissions and electricity costs.

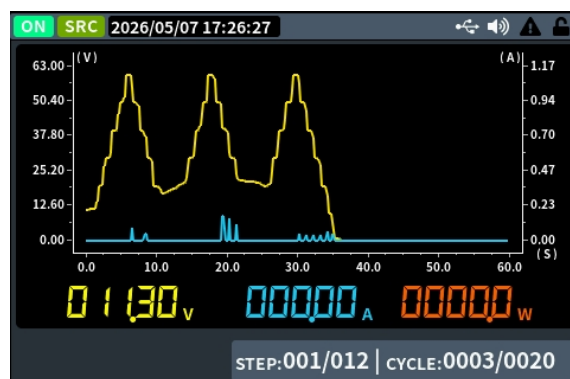
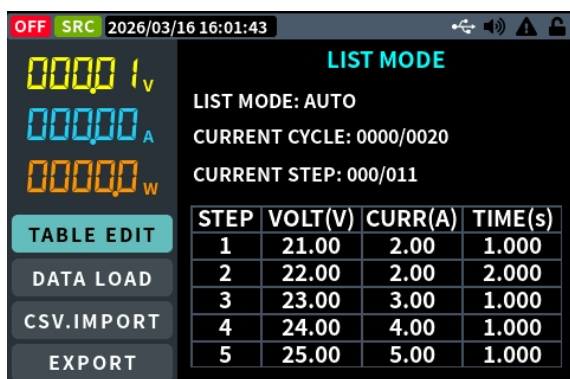


D

Powerful List Mode

The OWH67B series provide LIST function, supporting up to **100-step sequence programming**. Users can configure timing and output parameters either directly via the front panel or more efficiently through PC software control.

Additionally, the system supports **CSV file import via USB**, enabling the flexible generation of complex, arbitrary sequences to meet diverse testing requirements.



E

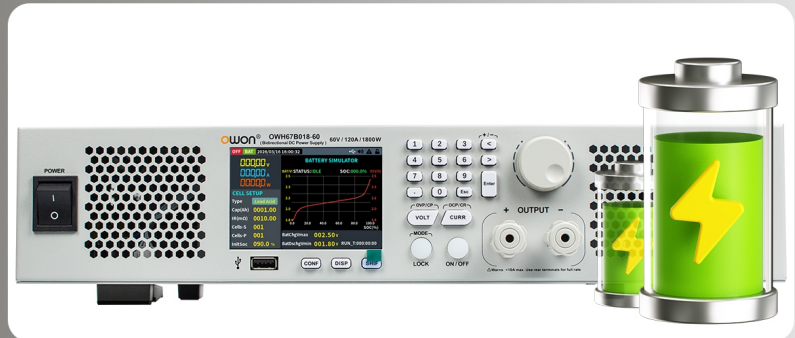
Battery Simulation

The OWH67B Series features **7 built-in high-fidelity battery models**, enabling precise simulation of diverse battery chemistries and discharge characteristics. This functionality streamlines battery-equivalent testing and advanced research.

7 Built-in

Mainstream Battery Chemistry Models

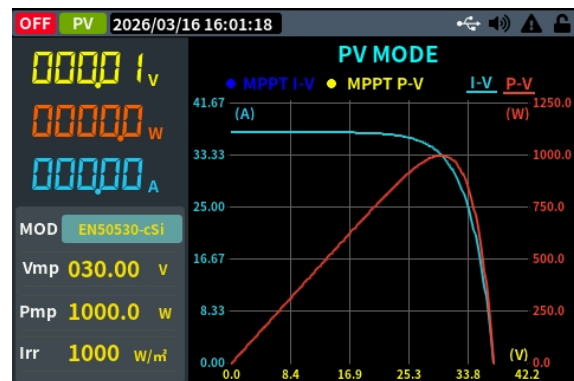
- LFP (LiFePO₄)
- NMC
- LMO
- LCO
- LTO
- NiMH
- Lead-Acid



F

Photovoltaic Simulation (optional)

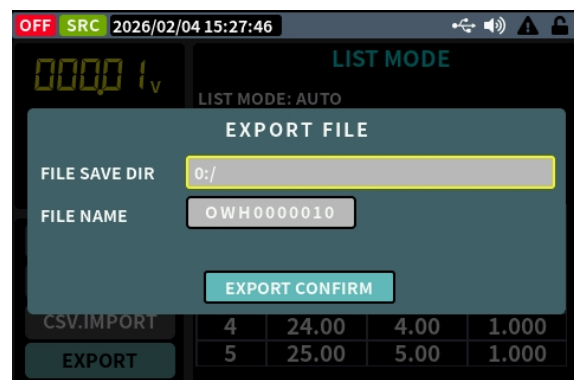
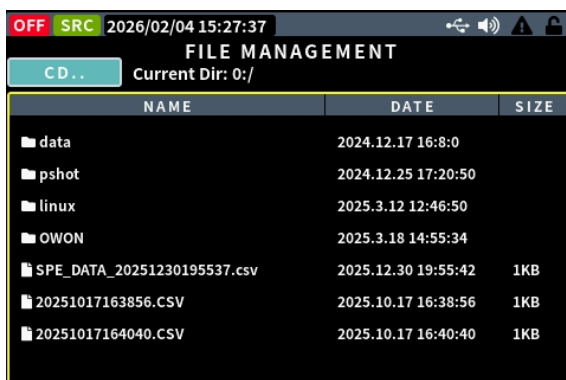
The OWH67B Series supports multiple **SAS (Solar Array Simulation) models**, including **built-in EN50530, Sandia, and custom curves**, to precisely simulate the output characteristics of PV modules under complex environments. Optional PV simulation software, users can achieve multi-channel **MPPT tracking and synchronized control**. It is ideal for the R&D and verification of grid-tied/string inverters, PV-storage systems, and PCS.



G

Monitoring & Efficient Data Management

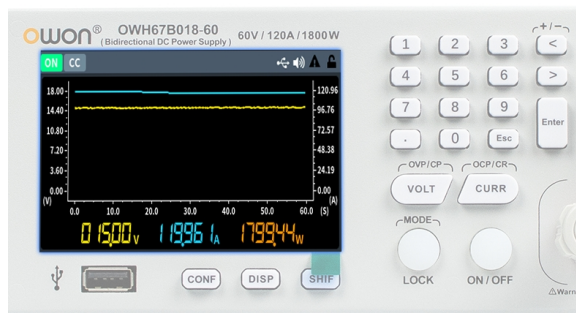
Featuring **USB screen capture** and **continuous data logging**, the OWH67B provides full traceability for every anomaly in extended test cycles. Supports **CSV file management** for flexible **storage and one-click recall** of test sequences and configurations, streamlining workflows through standardized digital data management.



H

Waveform Display

The OWH67B Series features real-time display of **voltage and current readback curves for the last 60 seconds**, enabling the precise capture of anomalies. Combining stable power output waveform monitoring, it streamlines complex testing tasks on a single platform.



I

Integrated Control Platform

Tailored for the OWH67B Series, this software integrates **precision remote control, battery simulation, and professional SAS PV simulation**. It supports seamless sourcing/sinking transitions, real-time monitoring, and complex **LIST programming**.

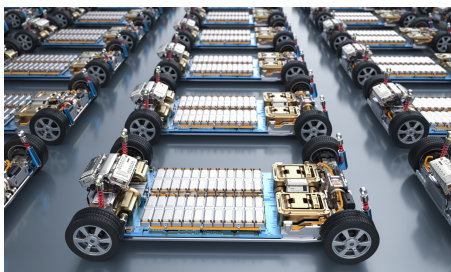


Applications

PV & Energy Storage: Micro-inverters, PCS, 48V storage systems, and portable power stations.



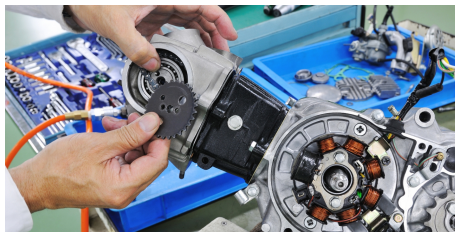
New Energy Vehicles: 48V MHEV, OBC, DC-DC converters, and automotive electronics.



Battery Charge/discharge Testing: 48V ESS packs, UAV batteries, and E-bike/Scooter power batteries.



Motor & Drive Testing: Cordless power tools and industrial low-voltage servo motors.



R&D & Education: Power electronics labs for Electrical Engineering, Automation, and New Energy.



Main Specifications

The instrument must be operated continuously for more than 30 minutes at the specified operating temperature to achieve the following specifications

Model		OWH67B018-60
Rate Output (0°C-40°C)	Output voltage	0 - 60V
	Output current	-120A ~120A
	Output power	-1.8kW-1.8kW
Input	Volt/freq./Curr	100V-240Vac; 45Hz-65Hz; 13Arms Max
Load regulation (%of output+offset) ^[1]	CV	≤0.03% +0.03%FS
	CC	≤0.05% +0.05%FS
Line regulation (%of output+offset)	CV	≤0.03% +0.03%FS
	CC	≤0.05% +0.05%FS
Setting resolution	Volt/Curr	10mV/10mA
Readback resolution	Volt/Curr	10mV/10mA
Setting accuracy	Voltage	≤0.05% +0.05%FS
	Current	≤0.1% +0.1%FS
Readback accuracy	Voltage	≤0.05% +0.05%FS
	Current	≤0.1% +0.1%FS
Noise &ripple ^[2]	Voltage/Current	≤80mVp-p(Voltage),
Temperature drift	Voltage/Current	100ppm/°C(Voltage), 200ppm/°C(Current)
Dynamic (10%-90% rated load)		≤5.0ms
MOV		2.6V@120A
Working temperature		0-40°C
Display		3.95-inch TFT LCD
Interface		USB, LAN, RS485
Dimensions		428mm(W) x 88mm(H) x 446mm(D)
Weight		Approx. 12kg

[1] Voltage regulation is measured at the output remote sense points.

[2] 20MHz noise bandwidth; measured at the output terminals with a 10uF electrolytic capacitor and a 0.1μF ceramic capacitor in parallel across the output.

Specifications subject to change without prior notice.

Ordering Information

Ordering Information	Order NO.
Main Unit Models	
0-60V, 0-120A, 1800.0W, 1CH	OWH67B018-60
0-60V, 0-120A, 1800.0W, 1CH, Photovoltaic Simulation	OWH67B018-60-S
Standard Accessories	
Quick Guide	_____
Power cord	7Power-1/7Power-4(EU)
Data cable	7ULD10
Remote voltage sense terminals	7Term-1
AC terminal Protective cover	7cover-1
DC terminal Protective cover	7cover-2
Optional Accessories	
Handle	7L-B
Warranty	
Main unit: 1-year warranty (excluding accessories)	