



EP401

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EV Battery Charge & Discharge Equipment



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The EP401 is a maintenance device specifically designed for the charging and discharging characteristics of electric vehicle batteries. It can efficiently perform the charging, discharging, and balancing of battery pack modules, thereby improving the efficiency of battery pack maintenance.

 **Safe and Efficient Integrated Charging and Discharging**

 **Supports Various Lithium Batteries and Nickel-metal Hydride Batteries**

 **BMS System Protection Mechanism**

 **Multiple Safety Protections**



Features

1. Supports charging and discharging maintenance for various battery type;
2. Utilizes advanced charging and discharging testing technology to avoid interference with the BMS system;
3. Supports a maximum of 72 channels for cell voltage collection and 12 channels for temperature collection;
4. Automatically determines charging and discharging operations;
5. Wide voltage design with built-in multiple charging and discharging modes to meet the voltage and current requirements of various battery pack modules, ensuring safety while improving charging and discharging efficiency;
6. Reverse polarity, overtemperature, short circuit, overcurrent, fan failure, overvoltage, overcurrent, etc. will be warned to ensure hardware safety;

Functions

- 1. Charge/Discharge Test:** Adopting a wide voltage design, it is suitable for charging and discharging tests of battery modules of different voltage levels. Supports various lithium batteries and nickel metal hydride batteries.
- 2. Single Unit and Terminal Voltage Collection:** Supports real-time acquisition of pack terminal voltage and individual cell voltage.
- 3. Single Battery Core Protection:** Cell current and voltage protection thresholds can be set to prevent overcharge and over-discharge.
- 4. Terminal Charging and Discharging Protection:** Supports overvoltage, undervoltage, overcurrent, output short circuit, reverse connection protection and overtemperature protection.
- 5. Parameter Setting:** General mode can quickly start charging and discharging by setting a few parameters, while expert mode can set more detailed parameters.
- 6. Data Visualization:** During the charging and discharging process, the voltage of each single cell, terminal voltage, terminal current, the charging and discharging status, the charging and discharging capacity, etc. are monitored in real time.
- 7. History Records:** Automatically saves historical charging and discharging records, supporting both curve and bar chart data display formats. Historical data can be exported as Excel files to a USB drive or shared as PDF files via email or QR code for data overview.
- 9. Online Upgrade:** Supports online device upgrades without the need for local upgrades using a USB drive.

Parameters

Power input	AC90~264V/40~60Hz	Display	10-inch LCD screen, resolution 1280×800
Terminal voltage accuracy	$\leq \pm 0.1\%FS + 0.3V$, resolution: 0.1V	Charging control	constant current charging + constant voltage charging
Single cell voltage accuracy	$\leq \pm 0.1\%FS + 5mV$, resolution: 0.001V	Discharge control	constant current discharge
Test current accuracy	$\leq \pm 0.5\%FS + 0.2A$, resolution: 0.1A	Battery module charge and discharge protection	overcharge, over-discharge, and over-temperature protection for battery module
Charging & discharging voltage	DC 2~400V	Host protection	over-temperature, over-current, and current out of control trigger shutdown protection
Charge current	0~100A, maximum power 4.4kW	Reverse polarity protection	Supported
Discharge current	0~100A, maximum power 7.2kW	Abnormal protection	power line power failure, main cable power failure
Interface	RJ45×1/USB×2	Overtemperature protection	Resistor box overtemperature at 85°C; radiator overtemperature at 100°C