



**EP401**





# EP401

## EV Battery Charge & Discharge Equipment



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The EP401 is a battery pack module integrated charge-discharge machine designed based on the characteristics of lithium-ion batteries used in electrical vehicles. It can efficiently perform the charging, discharging, and balancing of battery pack modules, thereby enhancing the efficiency of battery pack maintenance.

-  **Integrated Safe and Efficient Charging and Discharging**
-  **Supports all types of lithium batteries and nickel-metal hydride batteries**
-  **Supports SOH battery health assessment and SOC battery capacity assessment**
-  **Multiple security protections**



### Features

- Support charging and discharging maintenance of various lithium batteries and nickel-metal hydride batteries.
- Support SOC/SOH, which can evaluate battery health status.
- Utilizes cutting-edge charge-discharge testing technology to prevent interference with the BMS system;
- Designed with a wide voltage range and equipped with various built-in charge-discharge modes, meeting the voltage and current requirements of diverse battery pack modules during charge-discharge operations, ensuring safety and enhancing efficiency;
- Allows flexible configuration of charge-discharge rules and activation cycles, effectively enhancing battery capacity;
- Equipped with safety features including reverse polarity protection, high-temperature alert, over-current protection, fan failure detection, over-voltage warning, and excessive current alert, ensuring hardware safety.

### Functions

- 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.
- Health assessment:** Support battery health status assessment, unique software algorithm to obtain SOC/SOH value.
- Single unit and terminal voltage collection:** Supports real-time acquisition of pack terminal voltage and individual cell voltage.
- Single battery core protection:** Cell current and voltage protection thresholds can be set to prevent overcharge and over-discharge.
- Terminal charging and discharging protection:** Supports overvoltage, undervoltage, overcurrent, output short circuit, reverse connection protection and overtemperature protection.
- 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.

### Parameters

Powerinput	AC90~264V/40~60Hz
Display	7-inch TFT LCD screen,resolution 1024×600
Data Communication	CAN,RS485
Group Terminal Voltage Accuracy	$\leq \pm 0.5\%FS + 0.3V$ , resolution:0.1V
Single Voltage Accuracy	$\leq \pm 0.1\%FS + 5mV$ , resolution:0.001V
Test Current Accuracy	$\leq \pm 1\%FS + 0.2A$ , resolution:0.1A
Charge and Discharge Voltage Range	DC 2~420V
Charge Currentrange	Maximum current 100A, maximum power 4.4kW

Discharge Current range	Max current:100A / max power:7.2kW
Charge Control	Constant current charging + constant voltage charging
Discharge Mode	Constant current discharge
Charge、Discharge Protection	Overcharge and over-discharge protection, over-high temperature protection
Host Protection	Over-temperature, over-current and out-of control current trigger shutdown protection
Reverse Polarity Protection	Supported
Abnormal Protection	Power cord power failure, main cable power failure
Over-temperature Protection	The resistance box over-temperature is 85°C; Radiator over temperature is 100°C