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Rudolf-Diesel-Str. 36
71154 Nufringen
Germany



TECHNICAL PRODUCT INFORMATION

Test & measurement instruments

- ▶ high - quality
- ▶ moderate prices
- ▶ excellent precision

Your contact:

Technical support, services, demo & rental equipment, price information
& quotes, consulting:

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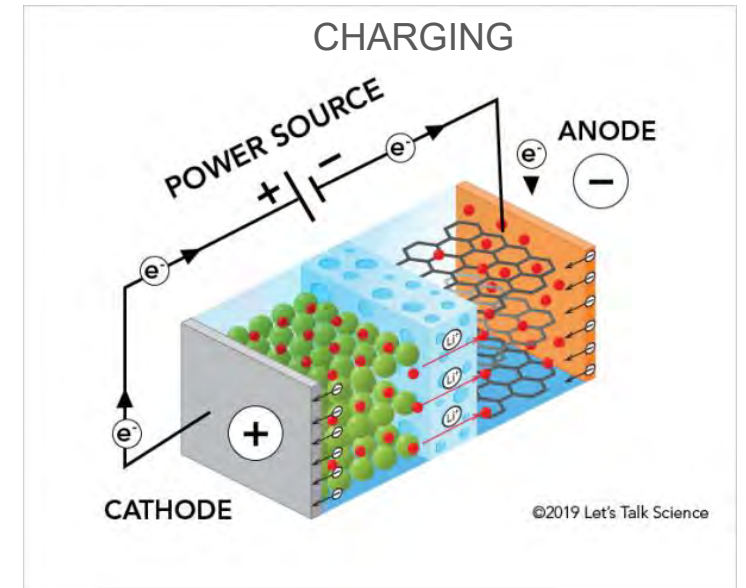
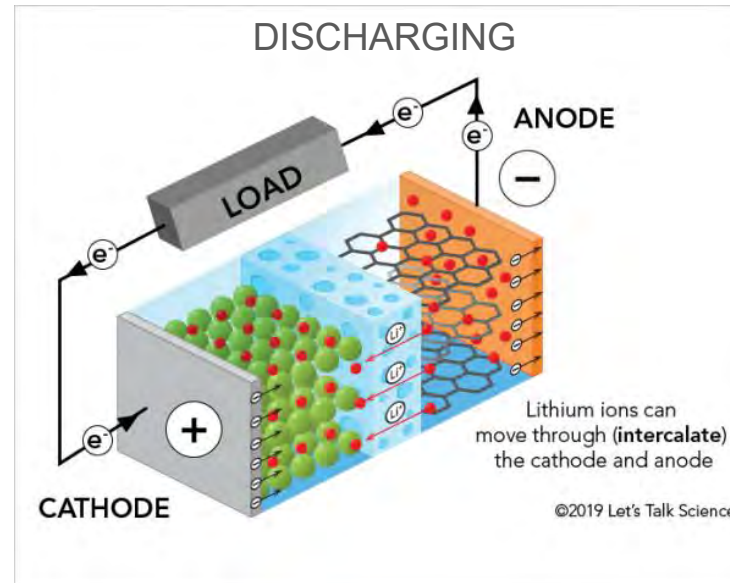
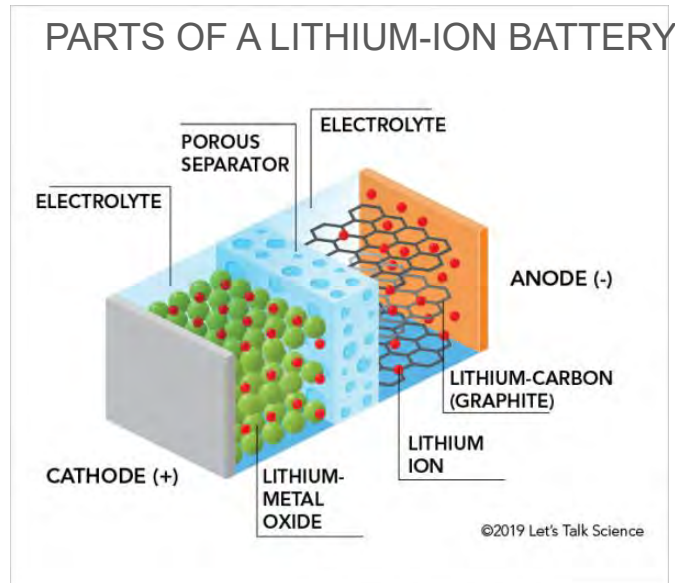
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Battery Charge-discharge Test System



Cell Introduction - Learn about the electrochemistry in the cells



Cell Introduction

Cell

Composition: Mainly composed of anode, cathode, membrane, and electrolyte.
Function: During the charging process, electrical energy is converted into chemical energy and stored; During discharge, the chemical energy is converted back into electrical energy and released.

1. Voltage range of battery cell: 2.0V~4.1V;
2. Individual cell capacity specifications include 280Ah, 300Ah, 314Ah, 320Ah, 600Ah, 1000Ah and so on.

Type

Ternary Lithium Battery, Lithium Iron Phosphate Battery, Lithium cobalt battery, Lithium ion manganese oxide battery, Lithium-titanate battery, Lithium polymer battery

Shape



Cylindrical Cell



Blade Cell



Pouch Cell



Prismatic Cell

Product Introduction - Relationship between Cells, Modules, and PACKs



Cells

2.0-4.1V/580AH



Module

Under 300V



PACK

Under 1600V

Cells make up a module

Modules make up a pack

Mostly used for energy storage



B2000-EC

Power: 9.6-28.8KW

Voltage: 0-6V

Current: 100-600A



B2000-EM

Power: 40-240KW

Voltage: 0-300V

Current: 100-600A



B2000-EP

Power: 100-600KW

Voltage: 24-2000V

Current: 300-1200A

The Problem Battery Charge-discharge Test System Can Solve



- **Safety Assurance**



- **Reliability Testing**



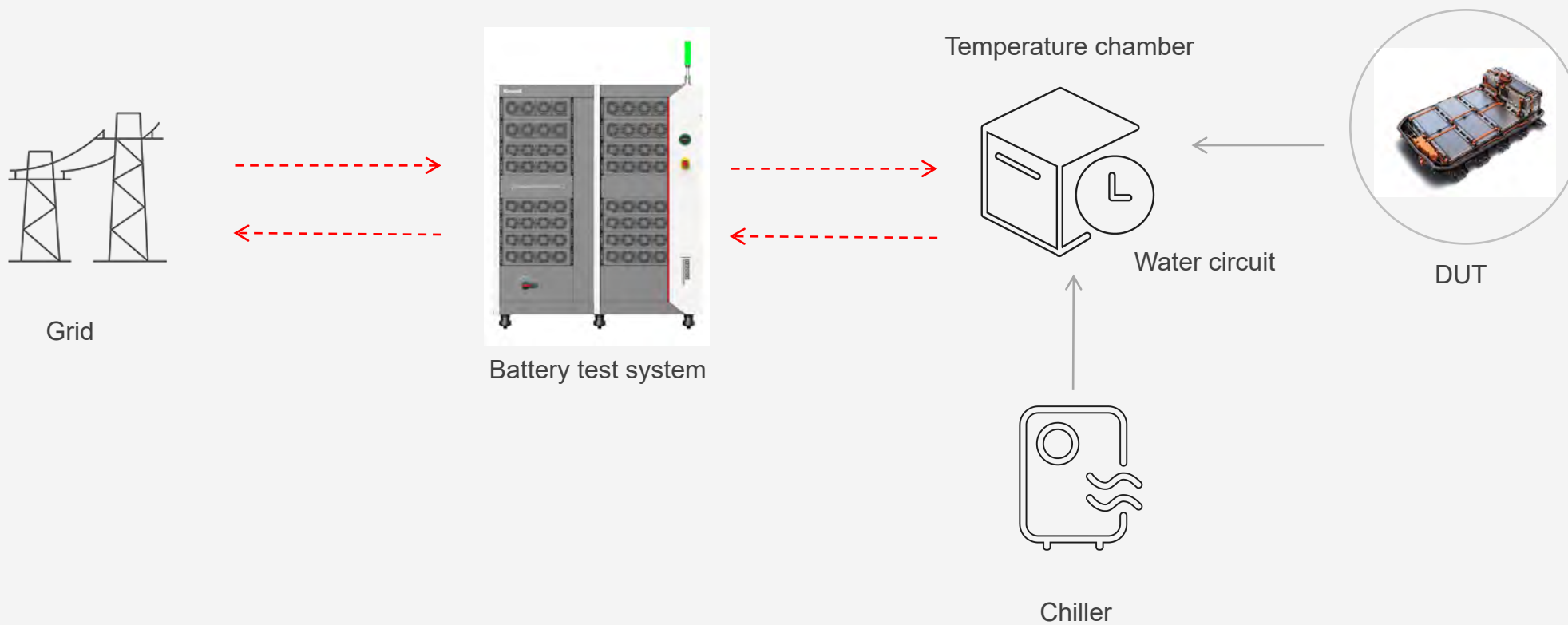
- **Performance Verification**



- **Optimization of Battery Management Systems (BMS)**

Reference Standards:

IEC 62660-1	Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 1: Performance testing
IEC 61960	Secondary cells and batteries containing alkaline or other non-acid electrolytes – Secondary lithium cells and batteries for portable applications
IEC 62619	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications
ISO 12405-4	Electrically propelled road vehicles --Test specification for lithium-ion traction battery packs and systems - Part 4: Performance testing



B2000-EC series is an efficient, high-performance cell charge-discharge test system.

It has the following application scenarios

Traction battery cell

Storage battery cell

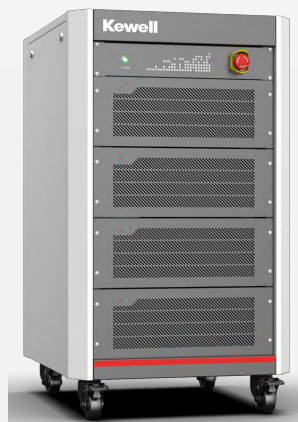
R&D

Test
Institute
s

Battery
EOL

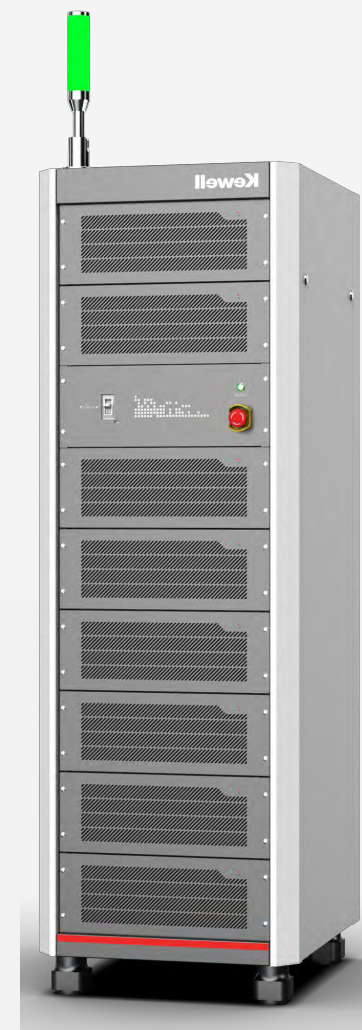


Product Portfolio



Rate power/CH [kW]	Voltage range [V]	Current range/CH [A]	Number of channels
1.2	0-6	200	8
1.8	0-6	300	8
3.0	0-6	500	4
3.6	0-6	600	4

Rate power/CH [kW]	Voltage range [V]	Current range/CH [A]	Number of channels
0.6	0-6	100	16
1.2	0-6	200	16
1.8	0-6	300	8
3.0	0-6	500	8
3.6	0-6	600	8



Modularized Design

Users can replace faulty modules on their own, no need of returning the equipment to factory.

Remove faulty modules and the equipment will run normally, avoiding affecting test efficiency



Space-efficient

Equipment width: 600mm, depth: 700mm

Footprint: only 0.42m²



Easy to Move

Weight

1050mm-high equipment: 160kg

1850mm-high equipment: 320kg

With casters, easy to move

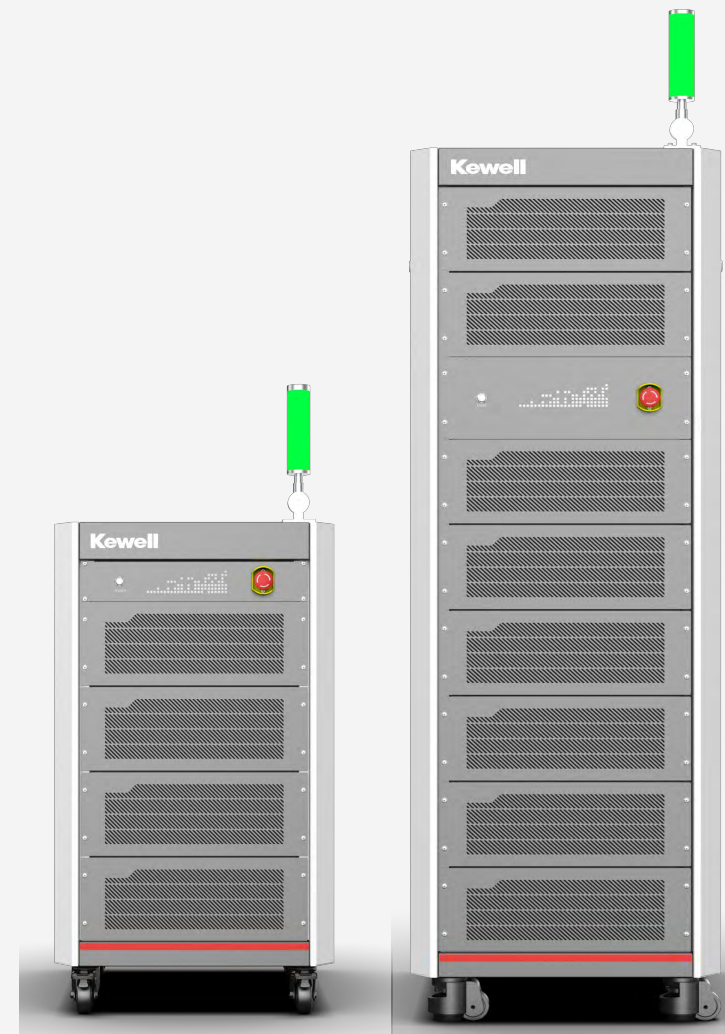
NORMAL

Outstanding parameters
Facing conventional test scenarios

PRO

Industry-leading parameters
Fully-featured for various applications

Para. Version	Voltage accuracy	Current accuracy	Current response	Working condition interval	Data logging time
Normal	±0.05%F.S.	±0.05%F.S.	2ms	20ms	10ms
Pro	±0.02%F.S.	±0.02%F.S.	1ms	10ms	1ms



Higher Testing Performance

Fast response, fast data saving, multi-channel paralleling, meeting a variety of extreme test conditions



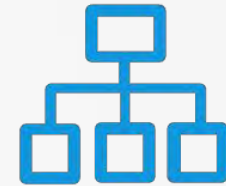
N Version:
Fast current response: 2ms

P Version:
Fast current response: 1ms



N Version:
Fast data saving: 10ms

P Version:
Fast data saving: 1ms



Multi-channel paralleling: up to
2400A



High Dynamic Response

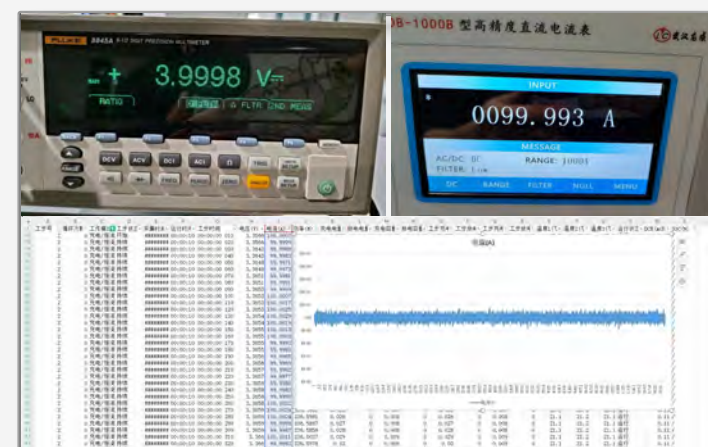
Current response time $\leq 1\text{ms}$ (0% ~ 90%)

Charge/discharge switching time $\leq 2\text{ms}$ (-90% ~ +90%)

Ultra-high Accuracy Four Current Ranges

Voltage and current accuracy: $\pm 0.02\% \text{F.S.}$

Current ranges: 50A, 100A, 200A, 300A

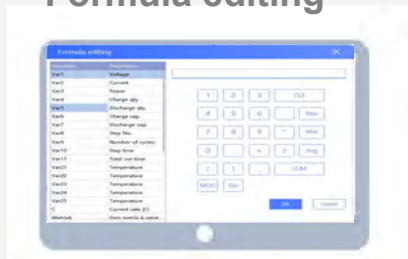


Complete Software Functions

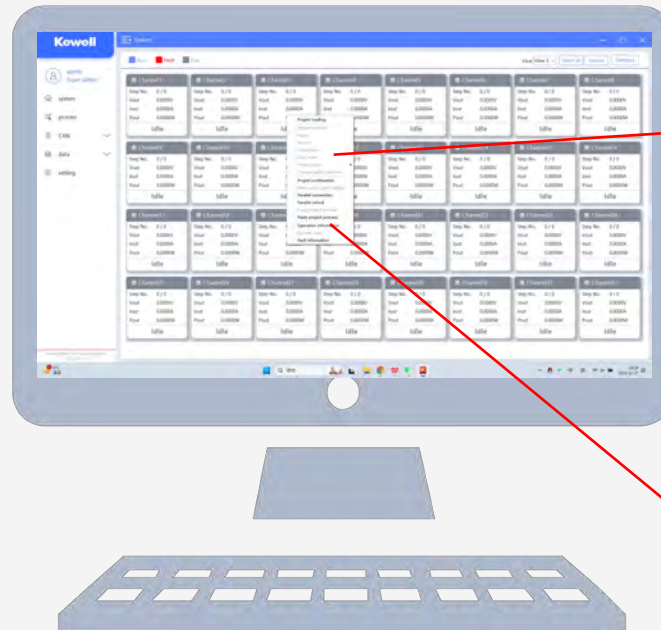
Pre-set pause



Formula editing



Project continuation



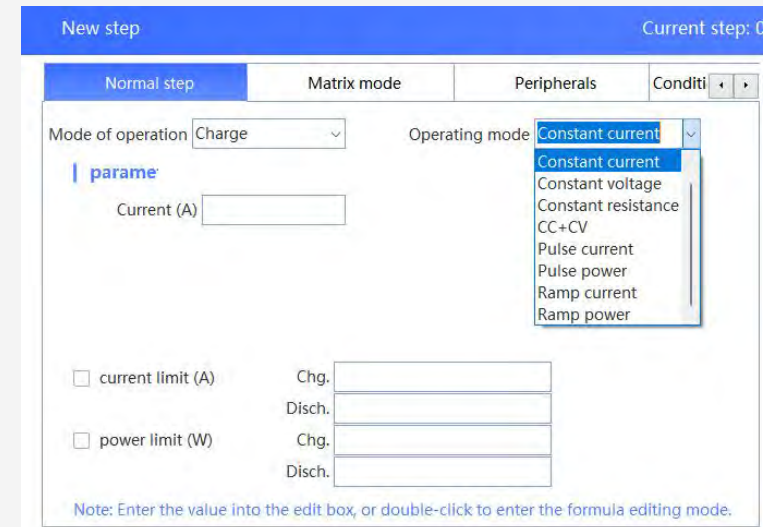
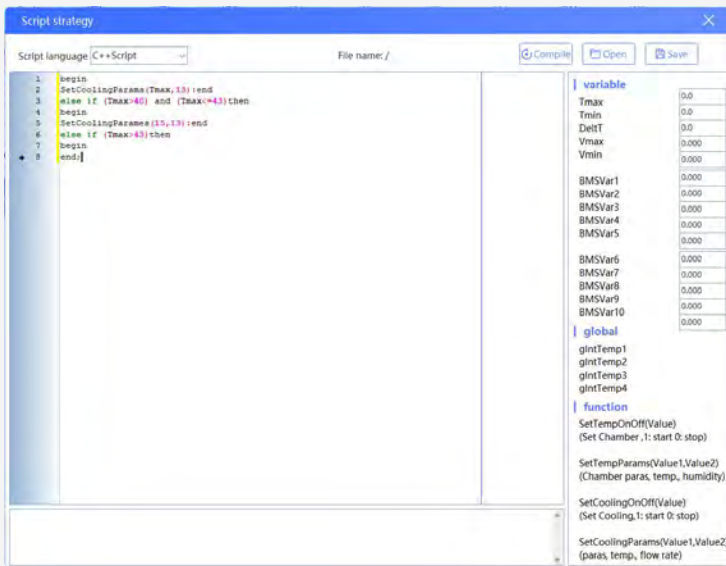
Longer right-click menu

More functions and easier operations

- Project loading
- Project initiation
- Pause
- Resume
- Project stop
- Fault reset
- Preset pause
- Change global variables
- Project continuation
- Interruption point setting
- Parallel connection
- Parallel unlock
- Copy project process
- Paste project process
- Operation information
- Current curve
- Fault information

Multiple Charge-discharge Modes

CV, CC, CR, CC+CV, pulse current, pulse power, ramp current, etc.



Programming Script Variables

Providing a variety of script programming or graphical programming interface for users to control the temperature chamber, water cooling and other devices.

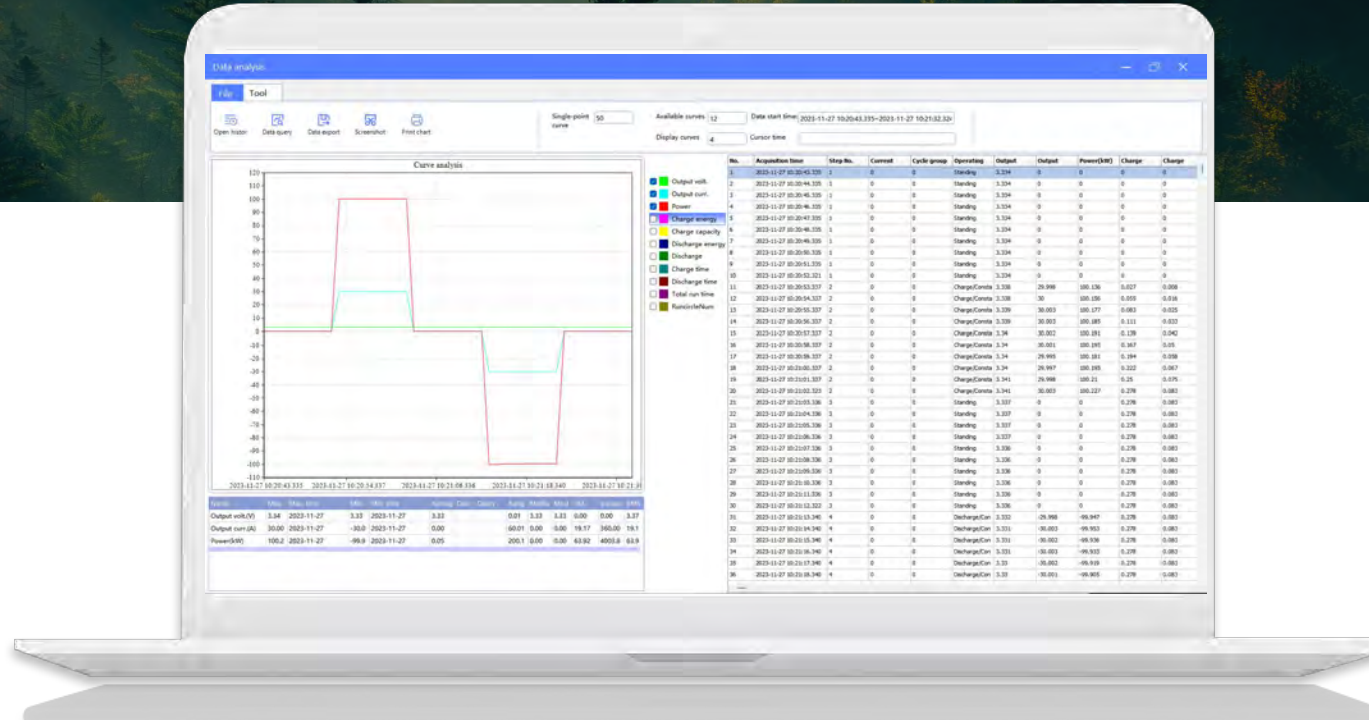
Super Fast Simulation of Operating Conditions

10ms roadmap simulation, accuracy: $\pm 0.02\%$ ·F.S., true to actual conditions, supporting dynamic test in line with reference standards such as CLTC, WLTC and NEDC

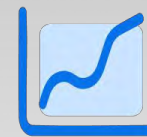


Online Data Analysis

Online data display, historical data analysis, and channel test data can be selected.



Multi-channel data logging



Data analysis

Kewell

We are dedicated to becoming a global test equipment supplier covering
versatile
application industries based on test power supplies.

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