5V 30A Battery Tester With Host Computer Connection

Item Number: DC08

Introduction

5V 30A battery tester with host computer connection delivers independent eight-channel charge discharge cycling pulse and DCIR testing, precise 16-bit measurement, centralized MySQL data management, and configurable safety protection for laboratory cell evaluation applications and research workflows demanding.

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Application	Description	Key Benefit
Lithium-ion cell charge-discharge characterization	Run independent constant-current, constant-voltage, constant-power, or constant-resistance profiles on multiple cells to assess charge and discharge response.	Eight independently controlled channels increase parallel laboratory throughput.
Cycle-life evaluation	Program repeated charge and discharge sequences using up to 65,535 cycles, 254 steps per cycle, and up to three nested cycle layers.	Supports long-duration life studies with structured, repeatable test logic.
DCIR measurement	Define custom data-sampling points during pulse testing to calculate DCIR under selected current and timing conditions.	Provides a configurable method for resistance analysis within the test workflow.
Pulse-power response testing	Apply constant-current or constant-power charge and discharge pulses with widths from 500 ms and up to 32 different pulses in one pulse step.	Captures transient cell response and enables controlled charge-to-discharge switching.
Battery R&D protocol development	Compare multiple cell designs, materials sets, or operating conditions using separate channel programs and detailed 10 Hz data recording.	Enables concurrent method development without requiring identical channel schedules.
Materials and electrode research	Evaluate electrochemical performance of research cells through controlled voltage, current, capacity, and relative-time cutoffs.	Helps relate formulation or processing changes to measured electrical behavior.
BMS communication studies	Use the optional CAN communication module to communicate with a BMS and acquire BMS data during testing.	Adds a path for correlating tester records with available BMS information.
Laboratory data consolidation	Store test data in the centralized MySQL database and export results for analysis on supported Windows-based server environments.	Improves traceability and accessibility of multi-channel test results.

Parameter	Specification
Site-facing identifier	DC08
Input power supply	AC 220V ±10% / 50Hz
Input active power	1.71 KW
Total channels	8
AD resolution	16bit
DA resolution	16bit
Input impedance	≥100kΩ
Constant-voltage control range	0.025V~5V
Minimum discharge voltage	0V
Voltage accuracy	± 0.05% of FS

Parameter	Specification
Voltage stability	± 0.05% of FS
Output current range per channel, range 1	0.03A~6A
Output current range per channel, range 2	6A~30A
Current accuracy	± 0.05% of FS
Constant-voltage cutoff current, range 1	0.012A
Constant-voltage cutoff current, range 2	0.06A
Current stability	± 0.05% of FS
Maximum output power per channel	150 W
Power accuracy	±0.1% of FS
Power stability	±0.1% of FS
Maximum current rise time	20ms (10% to 90% or 90% to 10%)
Step time range	≤(365*24) hours/step
Time format	00:00:00 (h, min, s)
Minimum data-recording time interval	100ms (recording frequency 10Hz)
Minimum voltage recording interval	10mV
Minimum current recording interval, range 1	0.012A
Minimum current recording interval, range 2	0.06A
Charge modes	Constant-current charging, constant-voltage charging, constant-current constant-voltage charging, constant-power charging
Charge cutoff conditions	Main channel: voltage, current, relative time, capacity, -△V
Discharge modes	Constant-current discharge, constant-power discharge, constant-resistance discharge, constant-voltage discharge
Discharge cutoff conditions	Main channel: voltage, current, relative time, capacity
Pulse charge modes	Constant-current mode, constant-power mode
Pulse discharge modes	Constant-current mode, constant-power mode
Minimum pulse width	500ms
Pulses per pulse step	A single pulse step supports 32 different pulses
Charge-discharge switching	One pulse step can continuously switch from charging to discharging
Pulse cutoff conditions	Voltage, relative time
DCIR test	Supports customized sampling points for DCIR calculation
Channel paralleling	Up to 4 adjacent channels can be paralleled; pulse testing is not supported after paralleling
Cycle test range	1~65535 times
Steps per single cycle	254
Cycle nesting	≤3 layers
Power-loss data protection	Offline testing function available
Configurable safety protection	Upper voltage limit, lower voltage limit, upper current limit, lower current limit, delay time
Reverse-connection protection	Available
Energy-saving efficiency	>65% (compared with conventional equipment)
IP protection rating	IP20
Channel architecture	Constant-current source and constant-voltage source use a dual closed-loop structure
Channel control mode	Independent control
Voltage and current detection sampling	Four-wire connection
Noise	<75dB (measured at 1m)
Database	MySQL database for centralized management of test data

Parameter	Specification
Host computer communication	Based on TCP/IP protocol
Server disk configuration	500GB
Data output	EXCEL2003, 2010, TXT
Server operating systems	Windows 7, Windows10
Communication interfaces	Network port; optional CAN communication module supports BMS communication and BMS data acquisition
Operating temperature range	0℃~40℃ (within 25±5℃, measurement accuracy is guaranteed: accuracy drift 0.005% of FS /℃)
Storage temperature range	-10℃~50℃
Operating relative humidity range	≤70% RH (no water vapor condensation)
Storage relative humidity range	≤80% RH (no water vapor condensation)
Fixture type	Optional
Available fixture examples	Polymer fixture; terminal lug fixture; select one fixture; images are for reference only and the actual product prevails
Compatibility note	Not compatible with batteries using protection boards with soft-start function