

ACT0505 Table Top Tester For Cell Testing



ACCURACY & VERSATILITY

- High-Speed Dynamic Cell Testing
- Ideal for R&D on small cells (single layer pouch, multi layer pouch, 21700 , 18650)
- Precision and Flexibility
- Flexible Channel Configuration from 5A to 50A

Product Details

The ACT0505 is a 10-channel table top tester, ideal for testing and evaluating coin cells, small pouch and consumer type cells from μ A's to 50A in high speed and accuracy demanding applications such as: (H) EV, solar, wind, grid and other energy storage solutions. This test equipment is portable, air cooled and is typically used by R&D labs and universities.

Preparing a test can be done off-line on an existing desktop PC, running our LifeTest™ application. The end user can configure the specific test by means of programmable instructions. The PC communicates with the cell tester over Ethernet to load the test regime and upload the measurement data.

The channels use a POWER MOSFET to obtain a very high accuracy, reliability and flexibility. 10 channels of 5V, 5A are mounted in 1 box.

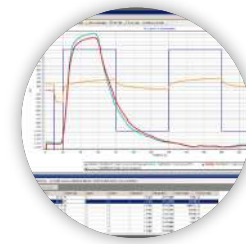
The system comes standard with 3 current ranges, that are automatically switched. Optionally, you can add analog and digital in-and-outputs to the system via the auxiliary I/O modules of 8 slots each (e.g. temperature sensors, voltage inputs, pressure sensors, digital output, ...)

The system supports current, voltage, power and resistive based loads, with a minimum pulsing width of 1 msec. Our ACT0505 system will give you ultra-fast switching capabilities between charging and discharging modes, guaranteeing the accuracy you need.

Highlights

- ✓ Portable / Stackable
- ✓ 10 independent 5V/5A channels
- ✓ Parallel switching mode across all channels for high current applications
- ✓ DYNAMIC linear electronic load
- ✓ 3 automatic switched current ranges
- ✓ High accuracy of +/- 0.03% FSD per range
- ✓ 1 msec sampling timing (100 μ sec internal)
- ✓ Redundant voltage measurement for safety
- ✓ Ultra-fast rise, fall and switching time between charging and discharging modes
- ✓ Climate Chamber Control Functionality
- ✓ Guaranteed stability with autonomous calibration & temperature compensation
- ✓ Air cooled
- ✓ High speed communication with the LifeTest™ Operator computer for fast data retrieval
- ✓ Temperature input per channel for temperature monitoring
- ✓ Internal Resistance measurement (AC & DC method)
- ✓ Import of program with very large number of steps for simulating complex power demand
- ✓ Optional : Auxiliary I/O such as analog voltage, temperature & digital input/analog voltage and digital output

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Technical Specifications

Voltage

Range	0 to +5 Vdc
Control accuracy	± 0.05% FSD (Full Scale Deviation)
Measurement accuracy	± 0.005% FSD (Full Scale Deviation)
Input impedance	10 MΩ

Current

Range	0 to 50 A (3 automatic switched current ranges 50 mA, 500 mA, and 50A)
Control accuracy	± 0.03% FSD in each range
Resolution	1μA (range 50mA), 10μA (range 500mA), 100μA (range 5A)
Capacity calculation	Accurate on board calculation of capacity values

Features

Measurement	4-point measurement, differential input
Sampling parameters for storage	Δvoltage, Δcurrent, Δtime, End of Event
Sampling frequency	1 msec (100μsec internal)
Minimum pulse width	1 msec
Rise, fall & switch time	< 1 msec
Memory	128 MB for test regime and data samples (per 5 channels)
Calibration	Automatic integral digital calibration (based on internal reference voltage)
On-board inputs	1 Temperature sensor input per channel
Charge / Discharge modes	Constant Current, Voltage, Power, Resistance etc.
End conditions	Time, Voltage, Current, Temperature (+ derivatives), Ch. & Disch. Capacity, Timers, Self-Created Variables
Internal resistance measurement	DC method with programmable current & AC method (1kHz)
Climate chamber control	Temp, humidity, rise rate
Auxiliary IO	Analog and Digital In-and-Outputs (e.g. Analog Voltage In-and-Output, Digital In-and-Output, Temperature Input)

Other specifications

Electrical Connection	1x100V - 240V
Max. power consumption	± 500 W
Weight	± 35 kg / ± 77lbs



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