



ACT0505 Table Top Tester For cell testing



The ACT0505 is a 10-channel table top tester, ideal for testing and evaluating coin cells, small pouch and consumer type cells from μA '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 μsec internal)

Redundant voltage measurement for safety

Ultra-fast rise, fall and switching time between charging and discharging modes

Climate Chamber Control functionality

Autonomous calibration and temperature compensation guaranteeing stability

Air cooled

High speed communication with the LifeTest™ Operator computer for fast data retrieval

Temperature input per channel for e.g. temperature monitoring

Fully programmable test profile in current, resistance, power, voltage and many more ...

Internal Resistance measurement (AC & DC method)

Import of program with very large number of steps for simulating complex power demand (e.g. Drive Cycle simulation,...)

External Control via I/O for HIL applications, ...

Optional : Auxiliary I/O such as analog voltage, temperature & digital input/analog voltage and digital output(e.g. measuring cell temperature and individual cell Voltages)



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For cell testing



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 5A (3 automatic switched current ranges 50 mA, 500 mA and 5A)
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,...
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:	1 x 100 V - 240 V
Max. power consumption:	± 500 W
Weight :	± 35 kg/± 77 lbs



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more info

