

CT0550 Cell Test System

High Volume Test Equipment



HIGH VOLUME TESTING & EVALUATION

- Ideal for Inspection and Validation Testing
- Accurate Simulations for Large Format Cells
- Reliable Measurements in 2 Ranges
- Application Specific Input & Output Extensions
- Flexible Channel Configuration from 50A to 1000A

Product Details

The CT0550 is a 80-Channel Cell Tester, ideal for testing and evaluating cells. This test equipment is used for high volume testing such as repetitive cycling, incoming goods inspection and validation.

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 an Event Table. The PC communicates with the Cell Tester over Ethernet to load the test regime and upload the measurement data.

Every channel is independent and uses a POWER MOSFET to obtain a very high accuracy, reliability and flexibility. Every group of 5 channels is controlled with 1 microprocessor. Each channel can run a different test regime. 80 channels of 5V, 50A are mounted in 1 test rack.

The system comes standard with 2 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 10 msec. Our CT0550 system will give you ultra fast switching capabilities between charging and discharging modes, guaranteeing you the accuracy you need.

Highlights

- ✓ 80 independent 5V/50A channels per rack
- ✓ Parallel switching across 20 channels
- ✓ 10msec sampling time
- ✓ High accuracy of +/- 0.03% FSD
- ✓ 2 automatic switched current ranges
- ✓ Internal Resistance measurement (DC method)
- ✓ Climate Chamber Control functionality
- ✓ Ultra fast rise, fall and switching time between charging and discharging modes
- ✓ Autonomous calibration and temperature compensation guaranteeing extreme stability
- ✓ Fully programmable test profile in current, resistance, power and voltage
- ✓ Optional : Auxiliary I/O such as Analog Voltage, Temperature & Digital Input/Analog Voltage and Digital Output
- ✓ Liquid cooling with central heat exchanger for accuracy and stability at high power

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Technical Specifications

Voltage

Range	0 to +5 Vdc
Measurement accuracy	±0.03% FSD (Full Scale Deviation)
Resolution	200 µV (24 bit converter)
Input impedance	>10 MΩ

Current

Range	0 to 50 A (2 automatic switched current ranges 5 A and 50 A)
Control accuracy	±0.03% FSD in each range
Resolution	100µA
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	10 msec
Minimum pulse width	10 msec
Rise, fall & switch time	< 1 msec
Buffer Memory	128 MB for test regime and data samples (per 5 channels)
Calibration	Automatic integral digital calibration (based on internal Reference Voltage)
AD converters	2 x 24 bit converters for Voltage and Current
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
Climate chamber control	Temperature, 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

Dimensions	1370 mm Width x 1927 mm Height x 770 mm Depth/ 54" Width x 76" Height x 31" Depth
Electrical	3x185...260VAC (Δ) + PE / 3x320...450VAC (Y) + N(Y) + PE 50/60 Hz
Max. power consumption	30 kW
Weight	± 600 kg/ ± 1323 lbs



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