

EXP-300CT Battery Discharge Cycler

- Wide voltage range battery discharger: 12 V to 96 V Nominal
- Programmable to run multiple charge/discharge cycles, without intervention, on lead acid and lithium batteries
- 7 inch LCD touch screen for easy operation and showing various parameters and graphing in real time
- Adjustable stop points and multiple alarm designs to control the discharge & charge process intelligently
- Supports RS485 real time monitoring via PC or USB download of data after discharge
- Free PC software for capacity evaluation and report generation available at Exponentialpower.com
- Modules between 1.2 V/2 V (qty. 10+1 spare) is included in the purchase of a 300CT. 2 V/6 V/12 V modules are optional.



OVERVIEW

EXP-300CT is a best-in-class test platform for traction battery cycling. Used for periodic battery testing and the regeneration. The EXP-300CT is an exceptional addition to your maintenance routine.

The wide voltage range of 12 V – 96 V covers almost all types of traction batteries (forklifts, AGV, automobile, golf cart, train, wheelchair etc.)

WORKFLOW

Connected by power cables



TEST RANGE

The EXP-300CT can support 12-96 V batteries, the applications for use of the EXP-300CT include:

Battery Nominal Voltage	Max Discharge Current
12 V	300 A
24 V	300 A
36 V	300 A
48 V	300 A
60 V	300 A
80 V	200 A
96 V	200 A

Cycle Times

Charge termination thresholds	Discharge termination thresholds
<ul style="list-style-type: none"> • Charge time • Ah charged • End Current 	<ul style="list-style-type: none"> • Discharge time • Ah discharged • Group voltage • Cell voltage
<p><i>Programmable rest period between charge and discharge cycles</i></p>	



Cycle No. 0 - Charge



Cycle No. 1 - Discharge



Cycle No. 1 - Charge



Cycle No. 2 - Discharge

Cycle No. 2 - Charge



Cycle No. N - Discharge

Cycle No. N - Charge

FEATURES

Multiple Adjustable Stop Points

- Offers multiple adjustable setpoints for test control to avoid excessive discharge & charge of the battery.
- Also offers a selectable number of cells which drop below the settings to report the true capacity of each cell, this design allows you to locate one or more cells which hinder performance and runtime.

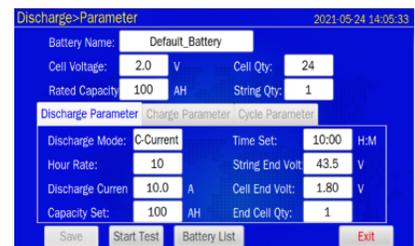
7-inch Touch LCD Display

- Full color LCD touchscreen displays real time data, graphs and controls the testing
- Intuitive menu design



Programmable Battery Profile

The preset functions for discharge & charge parameters provide multiple profile settings and recall from memory for setting up batteries in advance. This design simplifies the operation and speeds up the testing.



Internal Memory

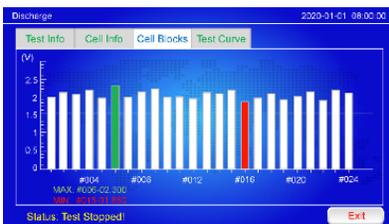
- Uses an internal memory to save all data without the need of having a laptop or software connected to the unit.
- The touchscreen interface provides management operations like reviewing, deleting, or downloading to PC by USB disk or RS485.

Wireless or (optional) wired modules for voltage monitoring

- Wireless modules for cell voltage measurement are available for 1.2 V/2 V/6 V/12 V batteries allow for continuous monitoring during test cycles.



- Each module can monitor 4 cells or batteries simultaneously. Compared with the manual recording of readings, labor to test batteries is significantly reduced.
- With modules, the EXP-300 CT uses real time scanning and displays the voltage data of each cell during the discharging & charging cycles. This displays the histogram of all cell performance during the whole cycle process.



- Intelligent diagnostic programming allows the EXP-300CT to identify the misconnection of voltage signals or faulty readings. This revolutionary feature makes the test stable and smooth.
- Also supports wired modules for special requirements.

Multiple Protections & Alarms

Malfunctions	LCD Prompt	Beep warning
Input over-voltage	✓	✓
Reverse Polarity	✓	✓
Overload	✓	✓
Overheat	✓	✓

Provides ample protective measures for various abnormal situations during discharge. Automatic termination, LCD prompts and audible warnings assist users to take proper actions.

PC ANALYSIS SOFTWARE

- Supports downloading of saved data via USB memory devices or analyzing through real time communication.
- The software interface reports battery voltage curves and bar charts, group voltage curve, current curve, capacity histogram, raw data form and more.



- The software measures the capacity of each cell, battery and string in the tested group.
- Software shows the data in various formats such as bar charts, curves, and tables. Operators can magnify or reduce any windows to read details more clearly.
- Automatically creates an EXCEL® data report, with calculations and graphs included.



Exponential
POWER



SPECIFICATIONS

Discharge Ranges Nominal

Voltage range	current range
8-72 V	0-300A DC
72-110 V	0-200A DC

Current measurement

Internal current range	0-300 A DC
Accuracy & resolution	$\pm 0.5\%$, 0.1 A
External current range	0-600 A (optional current clamp)
Accuracy & resolution	$\pm 1\%$, 0.1 A

Voltage measurement

Group voltage range	8-110 V DC
Accuracy & resolution	$\pm 0.3\%FS + 0.3$ V, 0.1 V
Cell voltage range	0-15 V
Accuracy & resolution	$\pm 0.2\%FS + 0.005$ V, 0.01 V

Power Supply

Power supply voltage	110/220 VAC (-20% to +30%)
Frequency	50/60 Hz
Power consumption	300W(max)

Communication & Storage

Communicate port	USB/RS485
Internal memory	2GB Flash

CE Certificate

LVD standards	EN61010-1:2010 EN61010-2-030
EMC standards	EN61326-1:2013 EN61000-3-2:2014 EN61000-3-3:2013

Environment

Operation temperature	-5 to 50° C or 23 to 122° F
Storage temperature	-40 to 70° C or -40 to 158° F
Humidity	5%-90% RH
Altitude	Below 4000 m or 13000 ft
Working noise	<70 dB

Dimensions & Weight

Main tester	15.0 x 14.0 x 31.6 in
Carrying Case	24.2 x 17.1 x 38.6 in
Weight	114 lb (main tester only) 216 lb (included all accessories and carrying case) 0.7 lbs (each wireless module)

Included Accessories

Carry case	1 – 24.2 x 17.1 x 38.6 in
Power cable	4 – 9 Foot cables 250MCM
AC power cord	1 – 3 wires x 18 AWG
Software	1
RS485 cable	1
User manual	1
USB disk	1 x 16GB

ORDERING INFORMATION

Type	Description
EXP-300CT	Battery discharge & capacity tester
EXP-200 CLAMP	200A external current clamp
EXP-600 CLAMP	600A external current clamp
EXP-2612	Wireless module for 2 V/6 V/12 V
EXP-12612	Wireless module for 1.2 V/2 V
Contact Us	Wired Cable modules for 1.2 V/2 V/6 V/12 V