

DC Load Bank Specifications

1. Summary

This document describes the specific requirements for a constant current DC load bank. Discharge data measured and displayed by a load bank should include:

- String Voltage
- Discharge Current
- Discharge Capacity
- Discharge Time

2. System Composition

The load bank requires the following components unless stated as optional:

Load Bank Body	Resistive load bank utilizes PCB firmware to control MOSFET switches to create an electrical load which will be applied to the battery system, to mimic a typical operational load.
Discharge Cables	Insulated cables used to carry load current from load bank to battery string.
AC Power Cord	Provides power to the unit at 110/220 VAC, 50/60 Hz.

3. Load Bank Capabilities

3.1 The load bank measures and displays the following discharge parameters:

- String Voltage
- Discharge Current
- Discharge Capacity
- Discharge Time

3.2 Overall string voltage, discharge current, discharge capacity, and test time can be toggled between to display in real-time during a discharge test.

3.3 Adjustable settings for auto shut-down of discharge are available, based on user-defined cutoff parameters for string voltage, discharge capacity, and discharge time. In addition, an alarm will sound and end the discharge in the event of overheating, an abnormal disconnection of the battery, or if improper polarity is detected.

3.4 Built in thermal shutdown. Safe circuits avoid damage to battery when testing. Circuit breakers prevent damage to the load bank's internal components.

3.5 Previously used parameters are saved after powering off the unit.

3.6 Large units are equipped with dual lift handles and robust 360° locking wheels for maximum portability.

4. Hardware Performance

4.1 Max discharge load available within 2 seconds of test start.

4.2 Two step start/stop command used, to prevent accidental start/stop of discharge test.

4.3 Auto sensing of battery system voltage via discharge cables.

5. Technical Specifications

Discharge Current Range:	0 – 2,000 A
Discharge Voltage Range:	0 – 600 V
Accuracy:	Discharge Current: $\pm 1\%$ Discharge Voltage: $\pm 1\%$ Discharge Control Precision: $\pm(0.3\% + 0.2 \text{ A})$
Resolution:	Discharge Current: 0.1 A Discharge Voltage: 0.1 V
Display:	Backlit numeric LCD
Operating Environment:	10 – 40 °C (14 – 104 °F) 0 – 90% relative humidity
Power Requirements:	110/220 VAC 50/60 Hz
Safety Features:	Over-voltage protection Automatic timed fan operation after discharge test

6. Warranty

12 months