

Programmable AC and DC Load Banks



Programmable AC and DC Load Banks are specialized testing devices used to simulate electrical loads and assess the performance of power sources, such as MCUs (Motor Control Unit), generators, inverters, UPS systems, batteries, and renewable energy systems. They provide a controllable and adjustable electrical load for testing and validating the power capacity, voltage regulation, and overall performance of the power source under various operating conditions.

Here are the key features and functionalities of programmable AC and DC Load Banks:

1. **Load Simulation:** These load banks can simulate different types of loads, including resistive, inductive, or capacitive loads, to mimic real-world operating conditions. They provide a controllable load that can be adjusted to various levels to test the power source's capacity and stability.
2. **Power and Voltage Adjustment:** The load banks offer programmable control over the power and voltage levels applied to the power source being tested. This allows users to simulate different load profiles and test the power source's response to varying power demands.
3. **Load Testing:** Load banks facilitate comprehensive testing of power sources by subjecting them to different load scenarios. They can assess the power source's performance during steady-state operation, transient conditions, peak load demands, or fault conditions.
4. **Data Monitoring and Analysis:** Programmable load banks often include monitoring and data logging capabilities to measure and record parameters such as voltage, current, power, and frequency. This data is useful for evaluating the power source's performance and analyzing its behavior under different load conditions.
5. **Overload Protection:** Load banks incorporate safety features to protect the power source being tested. They often have built-in overload protection mechanisms that can prevent excessive stress or damage to the power source in case of load faults or abnormal operating conditions.
6. **Remote Control and Automation:** Many programmable load banks can be remotely controlled and automated through software interfaces or protocols. This enables users to design and execute test sequences, monitor test parameters, and collect data automatically, improving testing efficiency and repeatability.

Programmable AC and DC Load Banks are widely used in industries such as power generation, renewable energy, telecommunications, aerospace, battery manufacturing and EV manufacturing. They

help ensure that power sources meet performance requirements, validate system designs, troubleshoot power-related issues, and optimize the efficiency and reliability of power systems.

Specification:

- DC, single phase, and 3 phase AC load bank
- Programmable R-L-C load bank for AC source
- Programmable resistive load bank for AC/DC source
- Constant Current and Constant Power functionality
- PC controlled load bank with user friendly HMI
- Load banks can be paralleled or connected in series to increase the load capacity