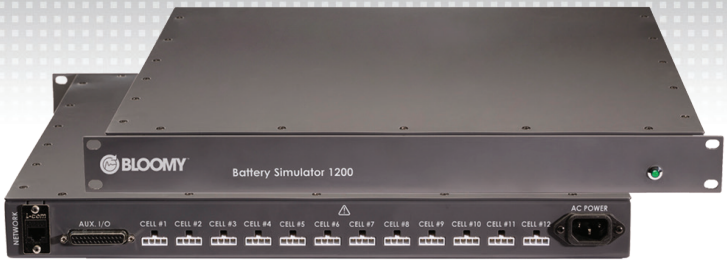
BLOOMY®

Automated test solutions for the entire product lifecycle

Battery Simulator 1200



Isolated channels with sink/source capabilities

The Battery Simulator 1200 provides twelve programmable cell channels that sink and source current for testing battery management systems (BMS) and battery-sensitive electronics. The cell channels are isolated to enable series connections for simulating battery modules, strings and packs. The instrument is controlled from a computer connected via Ethernet or high-speed CAN. The 1U rackmountable instrument can operate on a benchtop or stacked within a 19” rackmount enclosure. A soft front panel provides easy access to the unit for basic testing and initial startup, while software drivers and CAN database are ideal for automated test system integration. Built-in voltage and current readback sensing provide accurate cell voltage measurements and control without external monitoring equipment. The Battery Simulator 1200 is FCC and CE certified and relied upon by electrification companies globally.

APPLICATIONS

- BMS validation, verification, and production testing
- Test any battery-sensitive electronic devices
- Simulate strings of series-connected cells
- Hardware-In-the-Loop (HIL) test systems

FEATURES

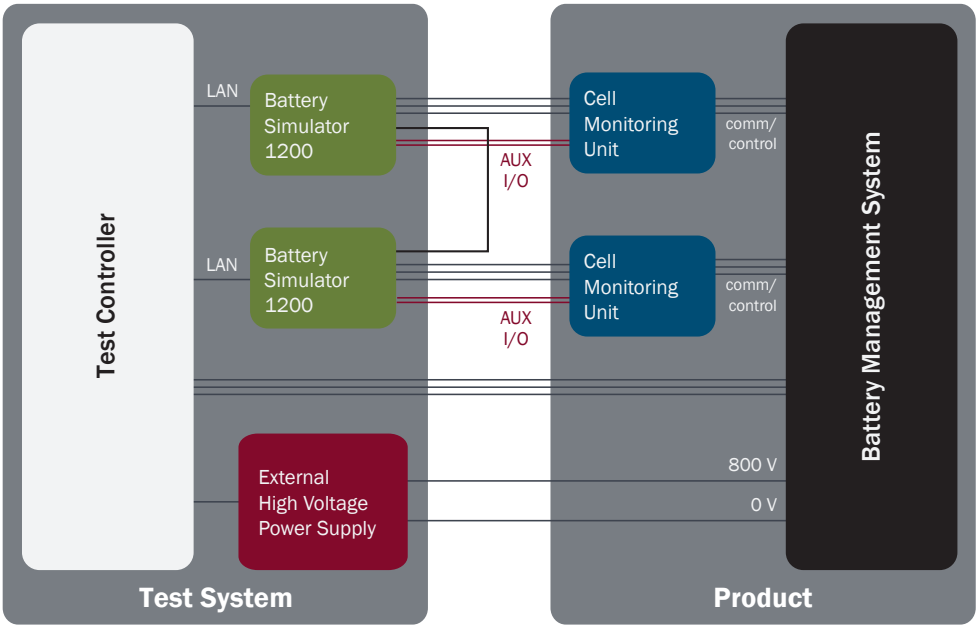
- 12 independently-controlled cell channels
- Sink and source 5 VDC and 500 mA per channel
- 1000V cell channel isolation*
- Auxiliary analog and digital I/O
- Ethernet and high-speed CAN control communications
- Soft front panel executable software
- NI LabVIEW™ drivers, CAN dbc
- FCC, CE certified

Testing a BMS?

Inquire about Bloomy’s turnkey BMS test solutions.

APPLICATION DIAGRAM

The Battery Simulator 1200 can be used in many test scenarios where stacked as well as series-connected cell simulation is required. Below is an example of integrating two Battery Simulator 1200 instruments and an external high-voltage supply into a test system. The two Battery Simulator 1200 instruments simulate 24 cell voltages and balancing currents to a cell monitoring unit (CMU). The high-voltage supply simulates an overall pack voltage of 800V. The auxiliary I/O is used for temperature and control I/O simulation.



HARDWARE SPECIFICATIONS

CELL CHANNEL SIMULATION	
Number of Channels	12
Channel Type	Sink and Source
Voltage Range	0.0 to 5.0V
Voltage Resolution	0.1 mV
Voltage Accuracy (requires remote sense)	±3 mV
Current Range	±500.0 mA (output derates linearly under 2V)
Current Resolution	0.1 mA
Current Accuracy	±4 mA
Current Limiting Accuracy	±10 mA
Isolation	1000V *
CHANNEL READBACK	
Voltage Resolution	0.1 mV
Voltage Accuracy	±3 mV
Current Resolution	0.1 mA
Current Accuracy	±4 mA
DIGITAL I/O	
Channels	8 (bidirectional)
Logic Level	3.3V

ANALOG INPUT	
Number of Channels	8 (single ended)
Max Voltage	5.0V
Voltage Resolution	0.1 mV
Voltage Accuracy	±5 mV
ANALOG OUTPUT	
Number of Channels	2
Voltage Resolution	0.1 mV
Voltage Accuracy	±5 mV
Max Voltage	5.0V
Max Current	10 mA
CONTROL	
Communication	LAN, CAN
Drivers	NI LabVIEW™
PHYSICAL	
Dimensions	19” W x 1.75” H x 15” D (1U) (482.6 mm W x 44.5 mm H x 381.0 mm D)
Weight	7.5 lbs (3.4 kg)
Operating Temperature	0 - 35°C

* Precautions are required for voltages exceeding 140V. Please refer to Application Note 8700-00038: Using the Battery Simulator 1200 in High-Voltage Applications.