



Automated test solutions for the entire product lifecycle



Battery HIL simulator for BMS development and validation

The *Desktop BMS™* HIL Test System is perfect for BMS software, firmware, and hardware engineers who need to simulate battery cells and signals for testing a BMS or CMU in a convenient desk- or bench-top location. Integrating Bloomy's industry-leading battery cell simulators, COTS instrumentation, and common DSUB connectors with Bloomy's BMS HIL Test Software Architecture, the system can easily connect to a wide variety of BMSs and CMUs using basic screw terminal breakout boards. By bringing the rigor of the HIL lab onto convenient, personal desktops. The *Desktop BMS™* HIL Test System helps maximize the productivity of multi-person battery engineering teams!

Desktop BMS™ HIL Test System

FEATURES

- Compact, rugged and transportable desktop form factor
- Simulates 12-36 battery cells with sink/source characteristics
- Voltage-based thermistor and pack current simulation
- Optional bidirectional pack power
- Discrete IO control and monitoring
- Control and monitor BMS communications
- Intuitive UI with model-based or direct control of simulated signals
- Parametric 2nd order equivalent circuit cell model
- Real-time or Windows-based HIL execution
- Ethernet connectivity to external PC or laptop
- Multiple configurations to meet a wide variety of testing needs

APPLICATIONS

- BMS software, firmware and hardware development
- BMS design validation testing
- Battery surrogate for subsystem integration test

Need more channels?

Inquire about Bloomy's *FLEX BMS™* Validation System.

STANDARD CONFIGURATIONS

Item	Basic	Basic – Resistance Thermistors	Standard	Plus	Advanced
Enclosure Size	6U	6U	6U	6U	8U
Cell Simulation	12 cells	12 cells	12 cells	24 cells	36 cells
Thermistor Simulation (Voltage)	12 thermistors	-	12 thermistors	12 thermistors	12 thermistors
Thermistor Simulation (Resistance)	-	8 standard or 4 enhanced	-	-	12 standard or 6 enhanced
Pack Current Signal Simulation	2 non-isolated	2 isolated	2 non-isolated	4 isolated	2 isolated
General Purpose AO	2 non-isolated	2 isolated	2 non-isolated	4 non-isolated 2 isolated	4 non-isolated 2 isolated
Industrial Digital Output	-	-	16	16	16
Industrial Digital Input	-	-	16	16	16
TTL Digital IO	-	-	8	8	8
Relay Dry Contacts	4	4	4	4	4
Analog Input (+/-10V)	-	-	-	32 SE (16 differential)	32 SE (16 differential)
Analog Input (+/- 150V)	-	-	3	3	3
BMS Serial Communications	1 RS232 1 RS485	1 RS232 1 RS485	1 RS232 1 RS485	1 RS232 1 RS485	1 RS232 1 RS485
BMS CAN Communications	-	-	1	1	1
Aux Communications	1 USB 3.0 1 Ethernet	1 USB 3.0 1 Ethernet	1 USB 3.0 1 Ethernet	1 USB 3.0 1 Ethernet	1 USB 3.0 1 Ethernet
Fixed Power Supplies	5V, 12V, 24V	5V, 12V, 24V	5V, 12V, 24V	5V, 12V, 24V	5V, 12V, 24V

¹ Resistance simulation modules not available in Windows environments

Standard Options

- 12, 24 or 36 cells
- DB50 Cell Breakout Kit
- Windows 10 Laptop, with software configuration
- Setup of customer-supplied PC
- Breakout kit
- 80 hours of application support
- VeriStand Operator License
- VeriStand Developer License

Custom Options

- Bidirectional power supply integration for pack power simulation
- Custom BMS communications interfaces
- Custom instrumentation types and quantities
- BMS-specific cable harness development

Call (860) 298-9925 or visit
www.bloomy.com