



WF Bifrost Module Tester Series

Brochure

The WF Bifrost Module Tester Series from WireFlow is a battery module tester where each channel can be run simultaneously and independent from each other.

The available products have been designed and built according to the real customer needs. Compared to other available products in the market, our module series provides you with all you need to shift seamlessly from simple to advanced test and measurements with the possibility of a high degree of customization

What

- Design verification
- Dynamic cycling
- Fast charge-/discharge test
- Delivery and maintenance charging
- SOH measurement
- WireFlow Total Discharge™

For

- Research and development
- Manufacturing
- After market and refurbishment
- Remanufacturing
- Repurposing
- Recycling

Configurable

In these product series, we offer off-the-shelf products as well as customised systems with different functionalities to deliver a solution meeting your specific needs.

Programmable

The system has a built-in script engine where you can write your own test sequences. All variables are available in the scripting environment, so it is easy to set up tests with almost any criterion. Tests can range from simple test cases such as cycling whilst doing coulomb counting to more advanced test cases.

Accessible historical data

All data that is available within the system can be logged during a test. The log files are easily accessible and exported to adjacent systems for further analysis.



Figure 1- WF Bifrost Module Tester

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Centralized

The system is controlled by a user-friendly software as a single point of contact. All channels can be run simultaneously and independent from each other and are controlled and monitored from one application.

Able to integrate

Using our Rest API, you can communicate and control the system from any adjacent system making it a seamless part of your production and test infrastructure.

Sustainable/lower cost of ownership

The system is regenerative where the power from discharge is fed back to the grid, minimizing heat dissipation as well as lowering the operating cost.

Safe

The system has support for monitoring temperatures, both internal and external, used for safety and to evaluate how the battery responds to different charge and discharge currents. All channels can be run simultaneously and independent from each other.

Upgradable

All products in this series are based on the Valand Battery Test and Measurement platform meaning that it makes it possible for customers to upgrade the systems with new versions and customer specific functionalities if needed.

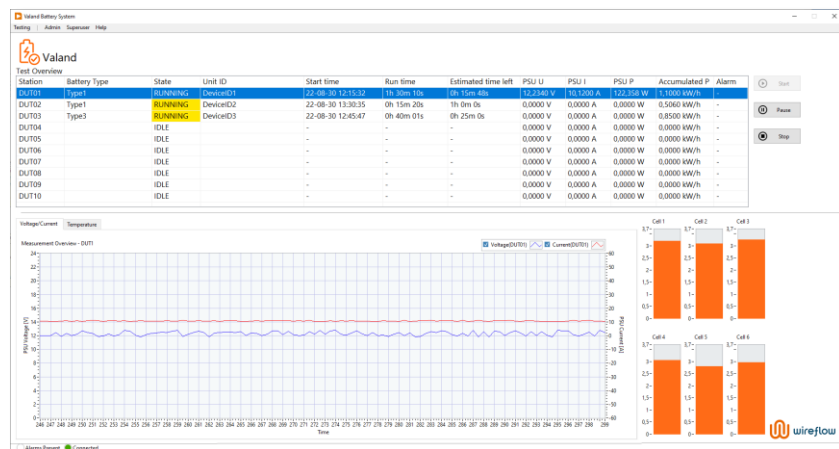


Figure 2 – WF Bifrost front end user interface

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Specifications	WF Bifrost for Module Reuse and Recycling	WF Bifrost for Module Repair and Refurbishment	Configurable for your needs
Number of channels	5	3	Customized
Max Voltage*	500 V	200 V	Customized
Max Current*	40 A	140 A	Customized
Power/channel	6 kW	10 kW	Customized
Jobs			
Charge to voltage	✓	✓	?
Discharge to voltage	✓	✓	?
WireFlow Total Discharge™	✓	✓	?
Measure cell voltage	-	✓	?
Measure SOH	✓	-	?
Qualify for 2 nd life	✓	-	?
Advanced SOH measurement**	-	-	?
Energy fed back to grid	✓	✓	?
Features			
Single Point of Control	✓	✓	?
Script engine for user defined test scripts	✓	✓	?
Data logging	✓	✓	?
Independent channels	✓	✓	?
Distributed IO-nodes	✓	✓	?
Rest API integration	✓	-	?
Safety			
Over temperature protection	✓	✓	?
Over voltage protection	✓	✓	?
Over current protection	✓	✓	?
Battery polarity check	✓	✓	?
Fuses and contactors	✓	✓	?
Options			
Scanner	-	✓	?

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Fingerprint reader		✓	?
MQTT publisher	✓	✓	?
Smart module support (isoSPI, RS485, CAN)	-	-	?
CO detector	-	-	?

* Voltage and current can be from 0 to maximum specified

** Advanced SOH: We also offer Advanced SOH measurements by using data analytics providing an extremely fast test process that is tailor made for your needs. Please request more information if interested.

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