

BZA500MC

MultiCell

Battery Impedance Analyzer



- Multicell Impedance measurement simultaneously in serial connection batteries & energy storage system.
- DC voltage measurement up to **max. 500V**
- Quick diagnosis of batteries and battery pack
- Impedance analysis software (ZMAN, WonATech DRT)
- Temperature monitoring
- Expandable up to serial connected max. 12 cells

The **BZA500MC** MultiCell Battery Impedance Analyzer is designed to measure battery impedance, DC voltage and battery temperature.

- Input range : 500V/50V (dual range: Master)
50V (single range: AuxV)
- Impedance measurement range : 500uΩ ~ 50Ω
- Application : Each cell's EIS evaluation in battery pack, battery balancing check, fuel cell stack



Floating

With the multi-cell equipment of floating structure, the impedance can be measured at the same time. It can be measured in the state of battery module or pack with no necessity of separate disassembly.

Cell Measurement

Each cell's EIS can be measured simultaneously.

Rapid Test

As many cells can be measured at the same time, the impedance measurement time per battery can be reduced.

High Density

The detailed data density measurement, it could be used for both QC and development.

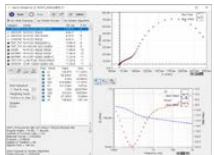
BZA500MC Muticell Battery Impedance Analyzer

Compact Size

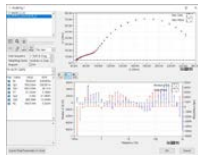
Compact size for a multi-cell system, weighing only is 7.2kg(4ch). Easy USB 2.0 connection to a PC.

Impedance Analysis Software (ZMAN & WonATech DRT)

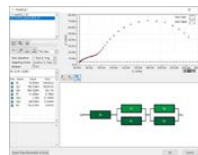
Automatic equivalent circuit searching and various impedance analysis functions are possible using ZMAN impedance analysis software & DRT analysis with WonATech DRT analysis software.



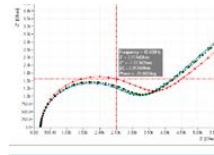
Automatic Model Searching



LEVM Fitting display



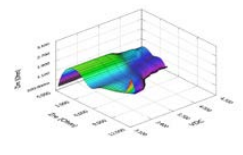
Modelling



Cursor data display



Model editor & model library

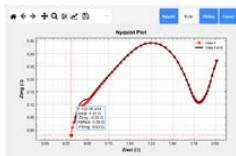


3D plot

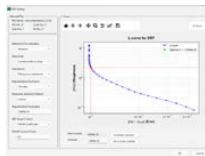
About & License Information

WonATech DRT Analysis v1.0

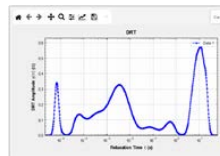
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Nyquist & DRT fitting



Best Lambda with L curve



DRT Plot



DRT Plot peak searching



Bayesian DRT Analysis

Cell Cable

The master cell cables for the BZA500MC are optimally designed for impedance testing of high voltage.



CATIII 1000Volt cell cable with standard 1000Volt alligator clip

4 Cell Auxiliary Voltage sensing cable



Accessories

The several accessories to help you with your research. The following optional accessories are available.

- Low impedance cable
- Cell cable modification
- Large alligator clip - ①
- Pt100 Temperature sensor
 - wire type - ②
 - tablet type - ③
 - sheet type - ④
- Kelvin type small alligator clip cable (1M) - ⑤
- Kelvin type large alligator clip cable (1M) - ⑥
- BZA-MC12- Jig - ⑦



①



②



③



④



⑤



⑥



⑦

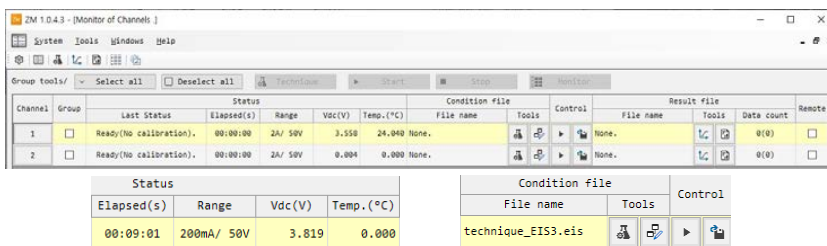
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Available Techniques

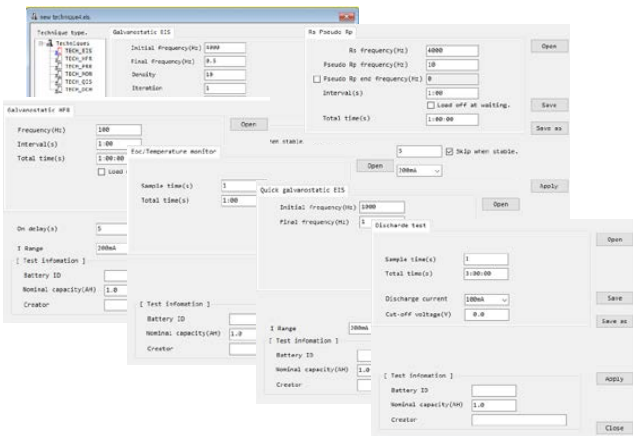
- Galvanostatic Electrochemical Impedance Spectroscopy
- Rs-pseudo Rp measurement
- High Frequency Resistance measurement (HFR)
- Eoc - Temperature monitor
- Quick galvanostatic EIS for screening
- Constant current Discharge test

Software

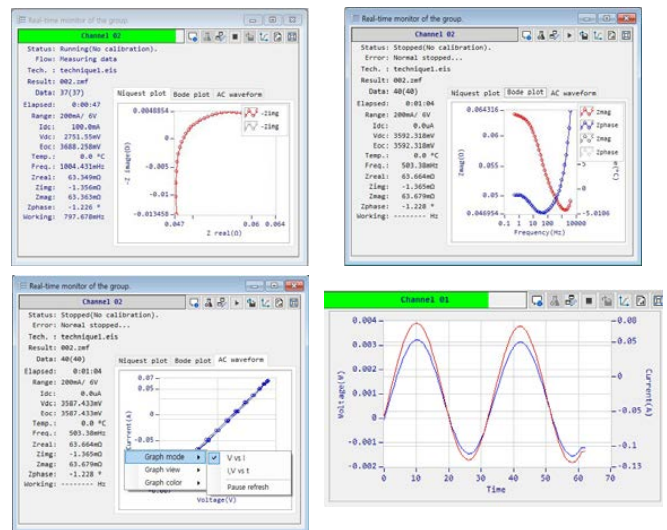
- Independent operation from the PC is available after the test starts.
 - A various scope of parameters for the test is adjustable that are used in the test.
 - Even if you lose connection of BZA and PC, if the device is powered on, the device will continue experiment.
- Data can be saved after the connection recovers.
- Data is saved in the form of binary format that is compatible with the ZMAN software thus can be transformed into the text (CSV, TXT).



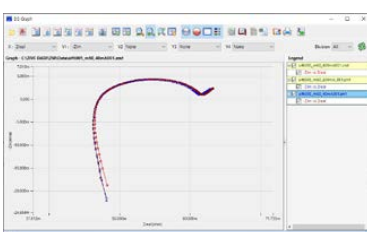
Control Screen



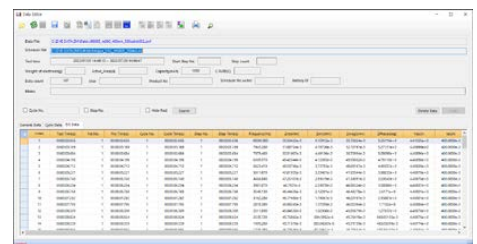
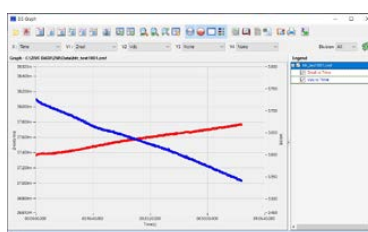
Technique selection & Parameter Input Box



Real time plot and data monitoring



Graph function



Report function

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BZA500MC Specifications

* All specifications are subject to change without notice.

Impedance Measurement

Measurement range	500uΩ ~ 50Ω
Accuracy	±1% magnitude (1mΩ - 50Ω) ±1° phase
Frequency range	0.05Hz ~ 10kHz
Current amplitude (p-p)	400uA ~ 2A

DC Voltage Measurement

ADC resolution	24 bit
Input range	500V/50V (dual range: Master), 50V (single range: AuxV)

AC Voltage Measurement

ADC resolution	24 bit
Input range	±250mV

AC Current Measurement

ADC resolution	24 bit
Current sensing resistors	4ea (2A, 200mA, 20mA, 2mA)

Sinewave Generator

Frequency range	0.05Hz ~ 10kHz
Frequency accuracy	< 0.1%
Frequency resolution	65535/decade
DAC resolution	10 bit
Output gain	2ea (x1, x0.2) total 8 current ranges (2A, 400mA, 200mA, 40mA, 20mA, 4mA, 2mA, 400uA)

Temperature Measurement

Input	RTD probe (PT100)
Accuracy	Max 1°C

Communication

Interface	LAN communication
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Dimensions

Size	207x304x243.5mm (WxDxH), 4ch/housing
Weight	9kg

Designed by

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www.zivelab.com



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