BITE5 Advanced
Battery Tester

Megger.

- ■ **Measures impedance on modules up to 500 V**
- ■ **Measures inter-cell (strap) resistance**
- ■ **Supports lead acid, NiCD and lithium-ion**
- ■ **Supports battery discharge testing**
- ■ **Monitoring battery recharge**
- ■ **Test parallel strings without segmenting**
- ■ **Touch screen set-up and trending**
- ■ **RFID Tag Reader**

DESCRIPTION

The BITE5 Advanced is a battery tester that will test lead acid batteries, NiCD batteries as well as lithium-ion batteries. It will measure and record battery voltage, impedance, temperature and inter-cell connections. The BITE5 Advanced also supports discharge testing. It will measure the voltage, current, impedance and temperature throughout the discharge cycle.

Battery impedance testing

The BITE5 Advanced will measure cell impedance, cell voltage, temperature and inter-cell connections (straps). The recorded data can be trended on the unit's touch screen. View the trended data of each test or trend the data of each cell. Set pass, warning, and fail limits for voltage and impedance and straps. Record the ripple voltage, ripple current, and float current and transfer the recorded data via USB or via an SD card to the PowerDB software, then create custom reports and automated analysis.

Battery discharge testing

The BITE5 Advanced will record voltage, DC current, impedance, and temperature of each cell throughout the entire discharge test. Measure the average impedance at the end of the commissioning test and use this as a limit for future impedance tests. Trend the recorded data on the BITE5 Advanced touch screen and view the trended data of each test, or trend the discharge of each cell.

Parallel strings

The BITE5 Advanced can test and troubleshoot parallel strings without the need for segmentation.

Recharge monitoring

The BITE5 Advanced will trend the discharge or recharge of a complete string.

FEATURES

- ■ Tests lead acid (VLA and VRLA), NiCD, and lithium-ion up to 500 V DC modules.
  - ■ Measures cell impedance
  - ■ Cell voltage
  - ■ Cell temperature
  - ■ Inter-cell connections (Straps)
  - ■ Cell voltage ripple
  - ■ AC current (ripple)
  - ■ DC current (float)
- ■ Supports discharge testing
  - ■ Measures cell voltages throughout discharge
  - ■ Measure cell temperature throughout discharge
  - ■ Measure cell impedance throughout discharge
  - ■ Measure DC current throughout discharge
- ■ Measure and record DC voltages up to 1000 V DC
- ■ Measure and record AC voltages up to 600 V AC
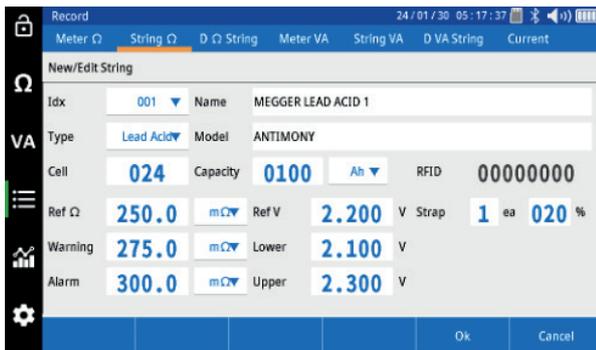- ■ Wirelessly transfer data to PowerDB

BITE5 Advanced
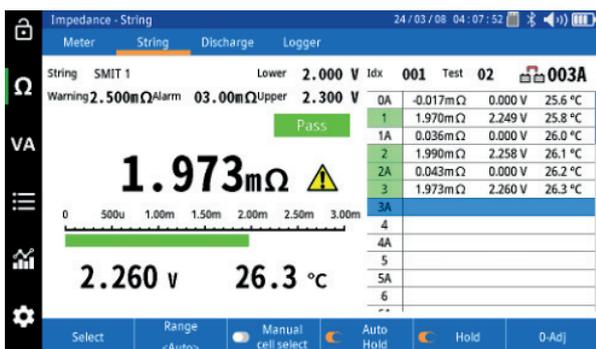# Battery Tester

APPLICATIONS

- View data in ohms or Siemens
- Battery impedance testing
- Battery discharge testing
- Parallel Strings
- String Recharge
- Troubleshooting EV Batteries
- Mobile battery packs (Forklift)
- Lithium-ion battery testing up to 500 V DC
- UPS testing with optional extension leads.
- ESS Systems
- Pitch control backup batteries.

Feature details

- Create string configurations:

- Impedance testing: measure cell impedance, cell voltage, cell temperature and strap resistance.

- Discharge testing: measure cell impedance, voltage, and temperature.

- View individual cell impedance data:

- Trend string impedance data:

- Trend inter-cell resistance:

- Log discharge and recharge:

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SPECIFICATIONS

Input power

AC/Adapter

Input	100 – 240 V AC (50/60 Hz)
Output	12 V DC at 2.5 A

Battery

Li-ion rechargeable pack	> 5.2Ah
Voltage rating	7.2 V
Charge time	4 hrs
Battery life	> 8 hrs
	300 charge/discharge cycles

Internal impedance

Range	Resolution	Accuracy
3 mΩ	1 μΩ	+/- 1 % of reading +/- 10 digits
30 mΩ	10 μΩ	+/- 0.8 % of reading +/- 10 digits
300 mΩ	100 μΩ	+/- 0.8 % of reading +/- 10 digits
3 Ω	1 mΩ	+/- 0.8 % of reading +/- 10 digits
30 Ω	10 mΩ	+/- 0.8 % of reading +/- 10 digits
300 Ω	100 mΩ	+/- 0.8 % of reading +/- 10 digits

Voltage DC/AC

Range	Resolution	Accuracy
5 V DC	0.001 V	
50 V DC	0.01 V	
500 V DC	0.1 V	+/- 0.5 % of reading +/- 5 digits
1000 V DC	1 V	
5 V AC	0.001 V	
50 V AC	0.01 V	
500 V AC	0.1V	+/- 0.75 % of reading +/- 10 digits (40 Hz – 100 Hz)
600 V AC	1 V	

Current DC/AC

Range	Resolution	Accuracy
4 A DC	0.001 A	+/- 0.5 % of reading +/- 1 digit + (CT Tolerance)
40 A DC	0.01 A	
400 A DC	0.1 A	+/- 0.5 % of reading +/- 5 digits + (CT Tolerance)
1000 A DC	1 A	
4 A AC	0.001 A	+/- 0.75 % of reading +/- 1 digit + (CT Tolerance)
40 A AC	0.01 A	
400 A AC	0.1 A	+/- 0.75 % of reading +/- 10 digits + (CT Tolerance)
1000 A AC	1 A	

Temperature

Range	Resolution	Accuracy
10 °C ~ 100 °C	0.1 °C	+/-1 °C +/- 2 digits

Ripple voltage

Range	Resolution	Accuracy
0–5 V	0.001 V	+/- 0.5 % of reading +/- 10 digits (40 Hz – 10 KHz)

Repeatability	0.1 %, 2 σ

Record Capacity

Memory	8 GB up to 16 GB flash storage Impedance record: Max 1000 records VA record: Max 512 records

Environmental

Operating	0 – 50 °C (32 – 122 °F)
Storage	-20 – 50 °C (-4 – 122 °F)
Charging temperature:	10 – 40 °C (50 – 104 °F)
Relative humidity	10 – 85 % NC non-condensing
Altitude Operational	0 – 2000 m
Ingress protection	IP54

Display (transmitter and receiver)
160 x 90 mm touch screen

Safety/EMC/Vibration/Compliance
Meets the requirements of IEC61010-1, CE, UKCA

CAT Rating:	600 V CAT III, Pollution Degree 2
Shock and vibration	EN61010-1 EN60529

IEC61010-1:2010 (3rd Ed)
EN61010-1:2010 (3rd Ed)
IEN61326-1:2013
EN55011/A1:2010 (Class A)
EN61000-3-2:2014
EN61000-3-3:2013

Weight/Dimensions

Dimensions	240 x 160 x 65 mm (9.45" x 6.30" x 2.56")
Weight	0.9 kg (1.98 lbs)

OPTIONAL ACCESSORIES		
	Concentric probe – the concentric probe allows for battery testing on batteries with safety caps or safety lugs. Users can easily access the terminals through the access hole. The concentric probe comes in two styles. One probe comes with a 11.75 mm (1/2") tip the other has a 25.4 mm (1") tip. This allows access to terminals even on batteries with the deepest safety lugs.	90043-242 (11.75mm)
		90043-243 (25.4mm tip)
	BITE5 extension kit for probes. Allow operator to take measurements while being able to stand safely back from the voltages being measured. Ideal for UPS application. Extension leads sold separately. Available with straight and 90 degree probes.	See ordeing information for options
	3 meter right angle probe. For use with BITE5 extension kit.	90043-244
	3 meter straight probe. For use with BITE5 extension kit.	90043-245
	3 Meter clip on probes. Ideal for taking measurements across entire battery strings or logging of string discharge and recharge.	90043-246
	0 to 100 A AC CT. Used for measuring and recording AC ripple current. Jaw opening 0.96" ID (24.5mm)	MCV-100B5B

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Battery Tester

	1 to 1000 A AC/DC CT. Used for measuring and recording DC float current and discharge current. Jaw opening 2 inches (52.0 mm)	MCCV-1KDC-B5B
	Backpack for BITE5. Includes BITE5 pouch. Provides hands free transportation of the BITE5 and all BITE5 accessories.	1015-611

ORDERING INFORMATION

Description	Part number	Description	Part number
BITE5 Advanced	BITE5-ADV	Optional accessories	
Included accessories subhead		Concentric probe (1/2" tip)	90043-242
Duplex probes (with temperature probe)	90043-241	Concentric probe (1" tip)	90043-243
Voltage test leads	90037-576	100 A AC current clamp	MCV-100B5B
Charger	90039-077	1000 A AC/DC current clamp	MCCV-1KDC-B5B
Neck strap	90037-529	3 meter right angle probe	90043-244
Zero bar	90037-575	3 meter straight probe	90043-245
16 GB microSD card	90037-572	3 meter clip on probe	90043-246
microSD card USB reader	90037-571	Extension kit with straight probe	1016-066
USB cable	90037-569	Extension kit with 90 degree probe	1016-064
Stylus	90037-570	Extension kit with straight and 90 degree probes	1016-067
Carry bag	90037-573	Backpack for BITE5 (with BITE5 pouch)	1015-611
Pouch bag	90037-574		

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