

## BITE5 Battery Tester



- Supports battery discharge testing
- Measures impedance on cells up to 200 V
- Supports lead acid, NiCD and lithium-ion
- Measures DC voltages up to 1000 V
- Measures AC voltages up to 600 V
- Touch screen set-up and trending
- USB and micro SD card
- Measures AC and DC current

### DESCRIPTION

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

#### Battery impedance testing

The BITE5 will measure cell impedance, cell voltage, and temperature. 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. 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 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 touch screen and view the trended data of each test, or trend the discharge of each cell. Transfer the

recorded data via USB or via an SD card to the PowerDB software, then create custom reports.

#### Solar systems

Measure and record combiner DC voltages. Measure the input and output of inverters. Test the lithium-ion batteries.

### FEATURES AND BENEFITS

- Tests lead acid (VLA and VRLA), NiCD, and lithium-ion
  - Measures cell impedance
  - Cell voltage
  - Cell temperature
  - 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 string voltages up to 1000 V DC
- Measure solar combiner boxes up to 1000 V DC
- Measure DC side of inverters up to 1000 V DC
- Measure AC side of inverter up to 600 V AC
- Wirelessly transfer data to PowerDB

## BITE5 Battery Tester

### APPLICATIONS

- Battery impedance testing
- Battery discharge testing
- Solar combiner box measurements up to 1000 V DC
- Lithium-ion battery testing up to 200 V DC

### FEATURE DETAILS

- Create string configurations:

Record 21/08/27 04:18:29

Meter Ω String Ω Meter VA String VA

New/Edit String

Idx: 003 Name: MEGGER

Type: Lead Acid Model: ANTIMONY

Cell: 006 Capacity: 0100 Ah

Ref Ω: 03.25 mΩ Ref V: 2.200 V

Upper1: 04.00 mΩ Lower: 2.000 V

Upper2: 05.00 mΩ

Ok Cancel

- Impedance testing: measure cell impedance, voltage, and temperature

Impedance - String 21/10/21 04:50:03

Meter String Discharge

String MEGGER String 002 String 04 Cell 012

Warning 200.0mΩ Alarm 220.0mΩ Lower 20.00 V

A HOLD A REC HOLD Pass

READY 106.2mΩ

21.70 v 25.1 °C

1	136.4mΩ	21.70 V	24.0 °C
2	149.7mΩ	21.70 V	24.1 °C
3	129.8mΩ	21.70 V	24.2 °C
4	110.8mΩ	21.70 V	24.3 °C
5	112.1mΩ	21.70 V	24.3 °C
6	111.1mΩ	21.70 V	24.4 °C
7	112.5mΩ	21.70 V	24.5 °C
8	107.9mΩ	21.70 V	24.6 °C
9	107.5mΩ	21.70 V	24.8 °C
10	107.6mΩ	21.70 V	24.9 °C
11	104.8mΩ	21.70 V	25.0 °C
12	106.2mΩ	21.70 V	25.1 °C

Select Range <Auto> Manual cell select Auto Hold Hold 0-Adj

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

Impedance - Discharge 12/03/21 13:56:07

Meter String Discharge

String Press 'Select' to select string. Idx Test Cell

READY

0.001 v --- °C

List is empty

Select Range <Auto> Manual cell select Auto Hold Hold 0-Adj

- View individual cell data:

Analyzer 12/03/21 13:53:37

Cell Ω String Ω D Ω Cell D Ω String D VA Cell D VA String

002 MEGGER

001	21	16.27 Vdc	5.02 Adc	10/22/21 00:14:24
002	20	17.29 Vdc	5.02 Adc	10/22/21 00:13:46
003	19	18.61 Vdc	5.02 Adc	10/22/21 00:13:06
004	18	19.25 Vdc	5.02 Adc	10/22/21 00:12:03
005	17	19.39 Vdc	5.02 Adc	10/16/21 04:42:17
006	16	19.61 Vdc	5.02 Adc	10/16/21 01:02:04
007				
008				
009				
010				
011				
012				

Select Record Chart <Vdc>

- View string data:

Analyzer 21/10/22 02:06:10

Cell String D Ω Cell D String D VA Cell D VA String

002 MEGGER

04	21/10/21	12	1	136.4mΩ	21.70 V	24.0 °C	21/10/21 04:48:29
			2	149.7mΩ	21.70 V	24.1 °C	21/10/21 04:48:44
03	21/10/08	5	3	129.8mΩ	21.70 V	24.2 °C	21/10/21 04:48:57
			4	110.8mΩ	21.70 V	24.3 °C	21/10/21 04:49:04
02	21/10/08	12	5	112.1mΩ	21.70 V	24.3 °C	21/10/21 04:49:11
01	21/09/02	12					

Select Record Chart <Impedance> Prev Page Next Page

- Measure currents (DC/AC) and ripple:

Volt / Ampere 21/10/22 00:12:16

Meter String Discharge

String MEGGER String 002 String 18 Cell 003

Lower 20.00 V

A HOLD A REC HOLD Pass

21.72 Vdc

0.029 VRipple

Select Range <Auto> Manual cell select Auto Hold Hold Save

- Measure voltages up to 1000 V DC and 600 V AC:

Volt / Ampere 21/10/22 00:12:16

Meter String Discharge

String MEGGER String 002 String 18 Cell 003

Lower 20.00 V

A HOLD A REC HOLD Pass

21.72 Vdc

0.029 VRipple

Select Range <Auto> Manual cell select Auto Hold Hold Save

## BITE5 Battery Tester

### 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	
300 mΩ	100 μΩ	
3 Ω	1 mΩ	
30 Ω	10 mΩ	
300 Ω	100 mΩ	

#### Voltage DC/AC

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

#### Current DC/AC

Range	Resolution	Accuracy
4 A DC	0.001 A	+/- 0.5 % of reading +/- 5 digits + (CT Tolerance)
40 A DC	0.01 A	
400 A DC	0.1 A	
1000 A DC	1 A	
4 A AC	0.001 A	+/- 0.75 % of reading +/- 10 digits + (CT Tolerance)
40 A AC	0.01 A	
400 A AC	0.1 A	
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 G up to 16 G 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)

# BITE5 Battery Tester

## OPTIONAL ACCESSORIES

Image	Description	Part Number
	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.	90037-560 (11.75 mm tip)
		90037-565 (25.4 mm tip)
	0 to 100Aac CT. Used for measuring and recording AC ripple current. Jaw opening 0.96" ID (24.5mm)	MCV-100B5
	0 to 1000Aac/dc CT. Used for measuring and recording DC float current and discharge current. Jaw opening 2 inches (52.0 mm)	MCCV-1KDC-B5

## ORDERING INFORMATION

Item (Qty)	Cat. No.	Item (Qty)	Cat. No.
<b>CATALOG NUMBER</b>		Micro SD Card USB reader	90037-571
BITE5	BITE5	USB cable	90037-569
<b>INCLUDED ACCESSORIES</b>		Stylus	90037-570
Duplex probes (With temperature probe)	90037-555	Carry bag	90037-573
Voltage test leads	90037-576	Pouch bag	90037-574
Charger	90039-077	<b>OPTIONAL ACCESSORIES</b>	
Neck strap	90037-529	Concentric probes (1/2" tip)	90037-560
Zero bar	90037-575	Concentric probes (1" tip)	90037-565
16G Micro SD Card	90037-572	100Aac Current Clamp	MCV-100B5
		1000Aac/dc Current Clamp	MCCV-1KDC-B5

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### BITE5\_DS\_EN\_V02

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