SCOPE

BRT 1

Battery Resistance Tester

Measure the battery resistance in one touch ...
... on BRT1

The Product

BRT1: Battery Resistance Tester

Battery bank installations are important & essential part of various power, telecommunication, information technology, railways, marine & other industrial setups.

In order to ensure healthy performance of such installations, the batteries used need to be properly monitored. One of the quick check methods is to measure the battery voltage & resistance of individual cells of a battery string and to identify & eliminate weak battery cells and save battery string from further degradation.

SCOPE's BRT1 is the comprehensive battery operated, portable, handheld Battery Resistance Tester suitable for all Lead Acid, Lithium-ion & Nickel Cadmium cells having cell voltage of 1.2V / 2V / 6V / 12V. This is all in one single unit that allows you to measure cell terminal voltage & internal resistance in one touch without taking the battery system offline.

Measurement

Cell capacity decreases due to various factors such as ageing, ambient temperature, discharge history etc. Regular maintenance and testing is a "must-have" procedure for standby batteries. With BRT 1 user can simply connect the clamps to cell terminals and it will automatically measure, display & save cell resistance and cell voltage. It takes less than 30 Sec for completing the test. Individual cells in a battery string can be tested one after the other without needing any start / stop operation in between. Smart design of BRT 1 will ensure quick, precisely & automatic measurement of each cell.

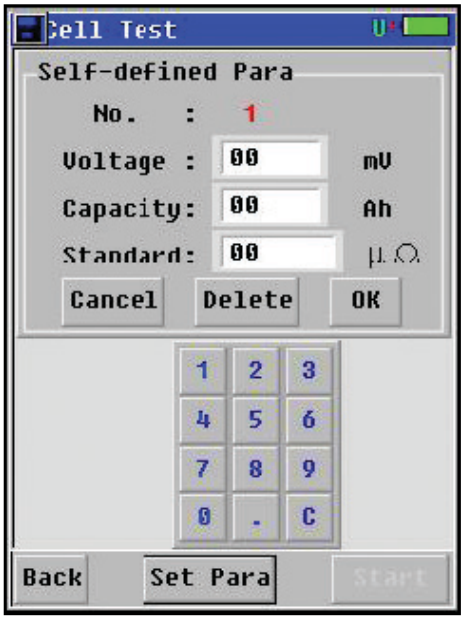
The operation is based on the principle of DC discharge using 4-wire measurement method. The instrument measures pure resistive component of the battery by eliminating reactance. Limited current of the battery is allowed to discharge over a certain period through the instrument. During this period resistance is calculated. The instrument has predefined set of resistance values stored in the memory for various types of batteries. It compares calculated resistance with these predefined ones, and displays percentage capacity of each cell.

The touch screen operation and PC Data Management Software supplied for analysis of results makes the battery management a pleasurable job.

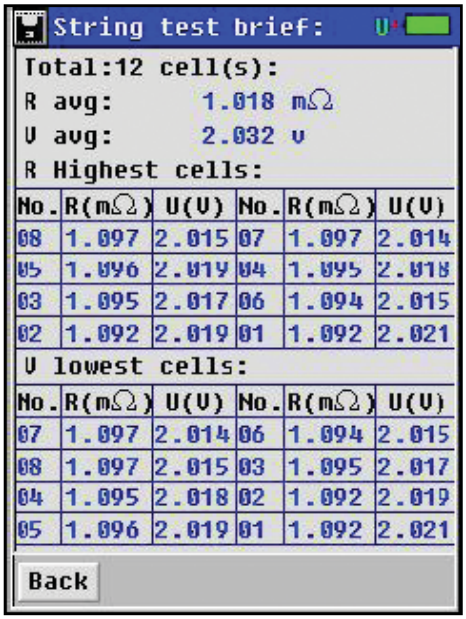
Special Features

- Smart, rugged and portable handheld device.
- Suitable for batteries up to 6000 Ah.
- Tests all types of batteries having cell voltage of 1.2V / 2V / 6V / 12V. Option of self-defined voltage is also available.
- Online measurement- No need to disconnect cell / string from system.
- Simultaneously tests cell terminal voltage, internal resistance and relative percentage capacity of the cell.
- Inbuilt reference value or self-defined value for comparison of test results with standard values.
- Low frequency testing effectively avoids interference from capacitive resistance of battery itself.
- Stable and accurate results in presence of high interference.
- Fast operation & quick stabilization & auto saving of results.
- Colour touch screen display as well as operation through keypad.
- Large memory to store results of up-to 3000 cells.
- Autocalibration of unit before testing.
- Over voltage protection & audio alarm.
- Analysis of results through PC Data Management Software including Histogram & report printing.

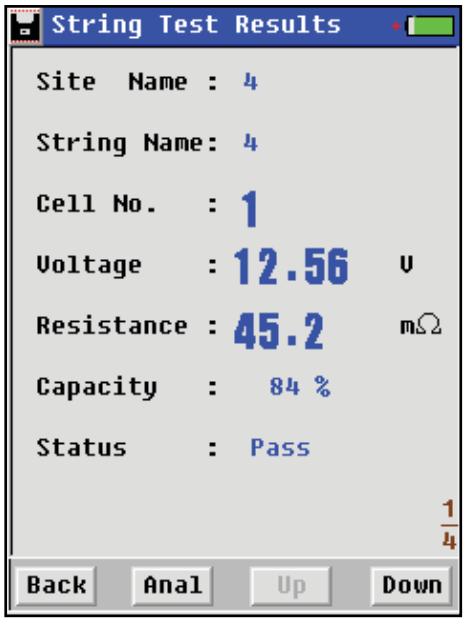
Test Results



Self Defined Cell Parameters



String Test Summary



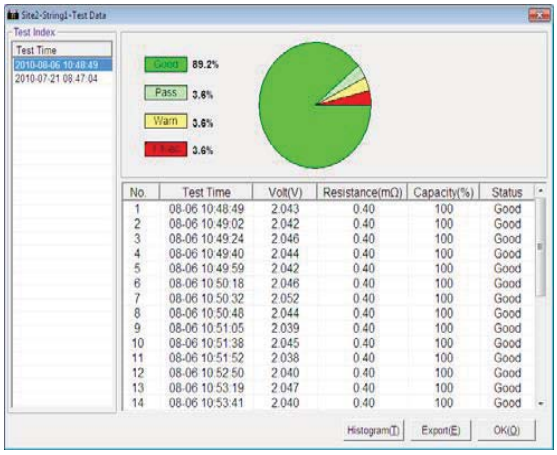
Test Results

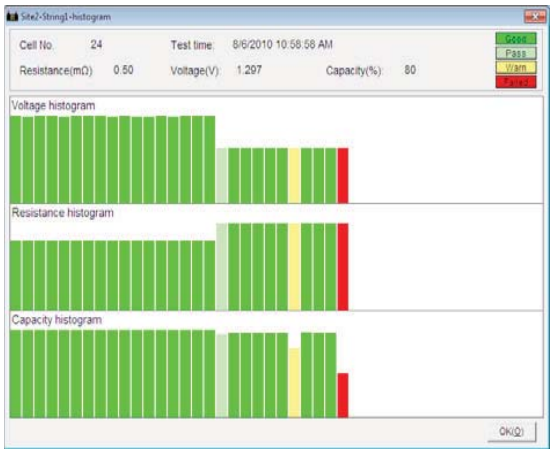
PC Data Management Software

The PC Data Management Software allows user to download all data from BRT 1 and store & analyse the same on PC. User needs to install/configure software on their PC. Test results saved in BRT 1 can be downloaded to USB pen drive and from there to PC. It is further imported in this analysis software. Software provides smart features for data analysis, battery condition tracking and report printing. Following are major features provided.

- **View Cell & String Data**

It displays detailed test results taken at different times for cells as well as strings separately. The test results include test time, string voltage, resistance, capacity and status. Percentage of health status category of battery will also be displayed on the top in different colors. User can click on each item to sort them out in sequences. It is possible to add comments.





- **Histogram**

Histogram visually displays cell performance in all aspects including cell number, time, voltage, resistance & capacity. Variation of cell parameters with respect to time can be easily seen & analysed by visual inspection of histogram.

Specifications

Parameter	Range	Resolution	Accuracy
Resistance	0 to 250mΩ	0.1μΩ	5% ± 6 digit
	250μΩ - 500μΩ	0.01mΩ	3% ± 6 digit
	500μΩ - 100mΩ	0.1mΩ	1% ± 6 digit
Voltage	0 to 16V	1mV	± 0.2% of reading ± 6 digit
Measuring Cells Per String	Up to 254		
Display	Colour TFT touch screen LCD, 320 x 240 pixel, 3.5"		
Memory	3000 test results		
Power Supply	Li-ion battery		
Working Time	> 5 hours continuous		
Environment	0°C to 50°C, up-to 95% RH (Non-condensing)		
Dimension (L x W x H)	210 mm x 110 mm x 60 mm		
Weight	2 kg (including accessories)		

Standard Accessories

- Test Cables with Clamps : 1 pair
- Battery Charger : 1
- USB Pen Drive with Software : 1
- USB Converter Cable : 1
- Soft Carrying Case : 1
- Instructions Manual : 1
- Factory Test & calibration report : 1

Optional Accessories

- Test Cables with Pin Type Probe : 1 pair

Simple solutions for difficult measurements®

Corporate Office
402, Aurus Chamber, Annex - A,
S. S. Amrutwar Marg, Worli,
Mumbai 400 013, INDIA
Phone: +91 22 4344 4244
FAX : +91 22 4344 4242
e-mail: marketing@scopetnm.com

Works & After Sales
EL 31/11, 'J' BLOCK,
MIDC Bhosari,
Pune 411 026, INDIA
Phone: +91 20 6733 3999
FAX : +91 20 6733 3900
e-mail : works@scopetnm.com

SCOPE T&M Pvt Ltd

www.scopetnm.com