

# Battery Tester SME1403



## Features

- Multiple test functions
  - 4-terminal test, not influenced by impedance of test leads.
  - Contact inspection, to inspect the contact of test leads in testing.
  - Deviation deduction (rel) and reference operation, eliminate the influence of base to test result.
- Feature of battery tester
  - Basic impedance accuracy: 0.1%
  - Basic voltage accuracy: 0.1%
  - Min. resolution of impedance: 1 $\mu\Omega$
  - Min. resolution of voltage: 100 $\mu\text{V}$
  - Max. test speed 50 times/s
  - 1kHz AC constant current source test
- R, V, L, Z,  $\theta$  test
- 24 bit color 4.3 inch LCD display
- LCD resolution 480 $\times$ 272
- Direct and  $\Delta\%$  display
- V, I test signal level monitor function
- Graphic scanning and analysis
- 10 bin compare, High limit, low limit, pass and alarm function
- Statistics, like CpK, Cp, etc
- 100 groups of file for storage and load
- Information in screen stored in U disk.
- Automatic update through USB HOST
- Foot switch trigger function
- Handler interface
- RS232, USB HOST USB Device GPIB optional for communication with PC and remote control

## Brief Introduction

As the growth of electronic products, cell phones, home appliances, electric vehicles and bike emerge in an endless stream, all need to work with battery, so the fast inspection on battery influences the performance of products.

The new battery tester SME1403 is competitive with other similar products with its outstanding performance, easy operation and new look.

- 1kHz constant current source is adopted to eliminate the potential error of thermoelectric force to DUT.
- Max. 300V (SME1403A) test voltage can meet the demand of high voltage battery.
- 0.1% basic resistance accuracy, the range of 30m $\Omega$  – 3000 $\Omega$  can cover the test demand of large battery pack to button battery and as well for large type but low resistance lithium battery
- The fast test speed up to 20ms/time
- Meet the demand of ACR test for general components.
- SME 1403 provides multiple interfaces for PC communication and remote control.

## Application

- Fast test for button battery and battery pack .etc.
- For cell phone, home appliances, electric vehicle and bike .etc.
- High voltage battery test
- Early battery R&D test
- Contact resistance test
- Degradation and lifetime evaluation of battery
- UPS on-line test
- ESR test of super capacitor

Model		SME1403	SME1403A
Parameter		R, V, R-V, Z- $\theta^\circ$ , Z- $\theta_r$ , L-Q, L-R, R-X, R-Q	
Basic Accuracy		R: 0.1%, V: 0.05%	
Test Signal source	Frequency	1kHz $\pm$ 0.2Hz sine waveform	
	Constance current	100mA / 10mA / 1mA / 100 $\mu$ A / 10 $\mu$ A	
Display Range	R/Z/X	1 $\mu\Omega$ – 3.5k $\Omega$	
	DC V	100 $\mu$ V – 65V	100 $\mu$ V – 350V
	L	0.2nH – 1H	
	Q	0.001 – 9999.9	
	$\theta_d$ (deg)	-179.99 – 179.99	
	$\theta_d$ (red)	-3.1416 – 3.1416	
Mathematics		Direct, $\Delta$ ABS, $\Delta$ %	
Range	AC R	30m $\Omega$ / 300m $\Omega$ / 3 $\Omega$ / 30 $\Omega$ / 300 $\Omega$ / 3k $\Omega$	
	DC V	6V / 60V	30V / 300V
Max. input voltage		65V	350V
Test speed (time/s)		Fast : 50 times/s Med : 10 times/s SLOW 1 : 5 times/s SLOW 2 : 3 times/s	
Comparator		10 bins	
Range mode		Auto, hold	
Trigger mode		Internal, manual, external, bus	
Operation mode		Test leads contact inspection; DUT I/V monitor; REL; short "0"; 1-255 average; delay setting; graphic analysis and scanning; USB storage: Max. 100 groups of file save/load; Statistics of Max. 30000 of data.	
Interface		Handler, RS232, USB Device, USB Host, GPIB (Optional)	
General Information			
Display		4.3 inch 480 x 272 24 bit color TFT Display	
Display Resolution		R: slow 5 digits, Max. displayed digit 35000; fast, Max. displayed digit 3500 V: slow 5 digit, Max. displayed digit 35000; fast, Max. displayed digit 3500.	
Operating Environment	Temperature	0°C – 40°C	
	Humidity	$\leq$ 90% RH	
Power Supply	Voltage	100V – 120V, 198V – 242V	
	Frequency	47Hz – 63Hz	
Power consumption		Max. 15VA	
Dimensions (WXHxD)		215mm x 87mm x 335mm (net.) 235mm x 105mm x 360mm (with sheath)	
Weight		About 3.6kg	

Subject to change

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