

## High-voltage Battery Tester HBT4000 Series



- 6 1/2-bit reading high-resolution internal resistance testing tester is a battery internal resistance tester with high accuracy and rapid measurement characteristics, and the measurement voltage range reaches 2100V.
- 0.1  $\mu\Omega$  resistance resolution, 10  $\mu\text{V}$  voltage resolution, has high precision, high speed, and suitable for various battery types.
- Standard RS232/485, LAN, EXT I/O, USB Host, USB Device, ANALOGOUTPUT interface, optional GPIB interface, suitable for more testing scenarios.
- Using AC 4-terminal method, the impedance can not be affected by the impedance of the test line during the impedance measurement.
- It has a comparison function with resistance and voltage respectively, and the battery intimidation and voltage are displayed at the same time.
- Short-circuit zero adjustment function, remove the bias voltage of the instrument or the error caused by the measurement environment.
- Support U disk screenshots to save functions, and you can upgrade the instrument program through the U disk.
- Internal impedance measurement range: 3m $\Omega$ /30m $\Omega$ /300m $\Omega$ /3 $\Omega$ /30 $\Omega$ /300 $\Omega$ /3.9k $\Omega$ .
- The full range of voltage measurement covers: 1300V/1700V/2100V.
- Draw a normal distribution map and visually observe the normal distribution of measurement results.
- The measurement results are easily saved into the U disk to facilitate subsequent data analysis and processing.

High precision and wide range

6 1/2, the voltage measurement range reaches 2100V, the resistance measurement range is 0 ~ 3.9kΩ , and the battery internal resistance testing internal resistance test instrument with high accuracy and rapid measurement characteristics is covered. Field meets your needs



Comparator function

Resistance and voltage are independent, and the function of displaying and output the measurement results will help you better understand the working status of your circuit or equipment.



Save/Load Function

The startup settings can be saved to the internal or U disk. There is no need to perform tedious application settings every time you use. Press the corresponding power -on settings button to easily load the previously saved application settings.



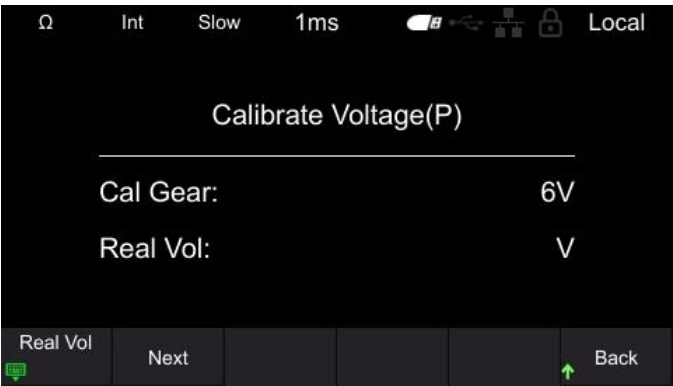
Three-speed sampling rate

The sampling rate can be changed in three stages (Fast/Horotelic/Slow), and the appropriate sampling rate can be selected according to different testing needs. The fastest high-speed measurement can be about 40 ms. The lower the sampling rate, the higher the testing accuracy.



Correction function

The calibration is divided into voltage calibration and resistance calibration, which is used to compensate the bias voltage or gain drift of the internal circuit of the instrument to improve the test accuracy.



Indicate	Resistance	Voltage
Average	298.249mΩ	000.254mV
Max	298.250mΩ	000.260mV
Min	298.246mΩ	000.248mV
Parent Standard Deviation	00.001mΩ	000.003mV
Sample Standard Deviation	00.001mΩ	000.003mV
Procedure Ability Index(Deviati...	99.99	99.99
Procedure Ability Index(Shift)	0	25.0389
Switch	StatResult	NorDistribut
Close		
S / L	DataTemp	Clear Data
	10	

Statistical function

Calculating a variety of statistical indicators, including but not limited to Average, Max, Min,Parent Standard Deviation, etc., makes it easy to plot the normal distribution and helps you visualize the normal distribution of your measurements.

Rich configuration interfaces

Standard RS232/485, LAN, EXT I/O, USB Host, USB Device, ANALOGOUTPUT interface, optional GPIB interface.



Model		HBT4561A/H	HBT4562A/H	HBT4563A/H	HBT4564A/H	HBT4565A/H	HBT4566A/H
Voltage Measurement	Range	160V	260V	410V	1300V	1700V	2100V
	Max. Display	176V	286V	451V	1430V	1870V	2310V
	Resolution	1 μV			10 μV		

	Accuracy	±0.01% rdg ±3 dgt						
ResistanceMeasurement		Range	Max. Display	Resolution	Measurement Current	Accuracy		
						3 mΩ	30 mΩ or more	
		3 mΩ	3.6 mΩ	0.1 μΩ	100 mA	±0.5% rdg ±10 dgt	±0.5% rdg ±5 dgt	
		30 mΩ	36 mΩ	1 μΩ	100 mA			
		300 mΩ	360 mΩ	10 μΩ	10 mA			
		3 Ω	3.6Ω	100 μΩ	1 mA			
		30 Ω	36Ω	1mΩ	100 μA			
		300 Ω	360 Ω	10 mΩ	10 μA			
		3900Ω	3910Ω	100 mΩ	10 μA			
Measurement Method		AC four-terminal method						
Measurement Frequency		1 kHz						
Response Time		5 ms approx.						
Open Terminal Voltage		12 V peak			15 V peak			
Sampling Period  (Frequency: 50 Hz/60 Hz)	Meas. Speed	Fast		Medium		Slow		
	ΩV	60 ms		300 ms		600 ms		
	Ω or V	40 ms		200 ms		400 ms		
Allowable Total Line Res.(error detection )	Range	3 mΩ		30 mΩ		300 mΩ		3 Ω
	Sense Line	3 Ω		3 Ω		20Ω		20Ω
	Source Line	3 Ω		3 Ω		20Ω		200Ω
Function	Zero Adjustment	Yes						

	<b>Meas. Current Pulse Output</b>	<b>Pulse, Continuous</b>
	<b>Statistical Calculations</b>	<b>Mean, Maximum, Minimum, Standard Deviation, Sample Standard Deviation, Process Capability Index (Dispersion), Process Capability Index (Deviation)</b>
	<b>Delay Time</b>	<b>1 ms to 9999 ms</b>
	<b>Average</b>	<b>1, 2, 4, 8 times</b>
	<b>Save/Load</b>	<b>Up to 1000</b>
	<b>Trigger</b>	<b>Internal, External, Manual</b>
<b>Interface</b>	<b>Standard</b>	<b>RS232/485, USB, LAN, I/O, Analog Output</b>
	<b>Optional</b>	<b>GPIB (HBT4000H series models only)</b>
<b>Display</b>		<b>4.3 inch LCD</b>
<b>AC Input</b>		<b>110 V <math>\pm</math>10 % or 220 V <math>\pm</math> 10 %, 47 to 63 Hz</b>
<b>Dimension(WxHxD)</b>		<b>Low voltage: 208.5mm*84.5mm*264mm</b> <b>High voltage: 208.5mm*84.5mm*344mm</b>