



PRODUCT FUNCTION

- Used to measure the internal resistance, voltage, and temperature of the lead-acid, nickel-cadmium, nickel-metal hydride, and lithium batteries to judgement battery health status.

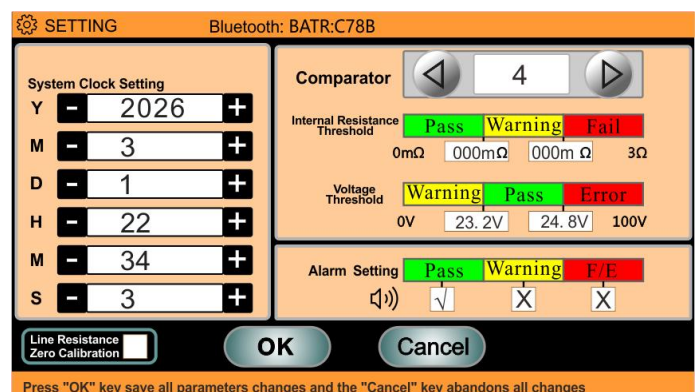
PRODUCT FEATURES

- Adopt with the Kelvin AC 4 - wire method measurement, unaffected by wire or contact resistance, obtaining accurate internal resistance measurement value.
- Displays resistance, voltage, and temperature at the same screen, test results clear and obvious.
- Adopt with the AC 1kHz test method, no need to interrupt battery power supply to other devices.
- Comparator function which can setting internal resistance and voltage thresholds for easier judgement battery aging.
- Filter function ensures the test reading more stable and accurate when enabled.
- Equipped with both pin-type and clip-on test leads to suit various application sties.
- Bluetooth communication function which can view and record test results on mobile device.
- Computer upload function, equipped with USB interface allows for easy uploading the test data to computer for storage and analysis.

COMPARATOR FUNCTION

- The battery gradually aging as battery using, and the internal resistance gradually increases. When the internal resistance is 1.5 to 2 times of a new battery, it can be judged that the battery is aged. By setting threshold values for internal resistance and voltage in a comparator, the aging state of the battery can be judged based on the test value.
- For example, a new battery internal resistance is 0.5 mΩ and voltage is 12V:

Parameter	New Battery	Using	Aging
Internal Resistance	0.5mΩ	0.75mΩ 1.5 times of the new battery	1.0mΩ 2 times of the new battery
Voltage	12V	10.8V 90% of the new battery	9.6V 80% of the new battery
Judgement	Qualified	Warning	Unqualified



MEASUREMENT ACCURACY

1. Resistance Measurement Accuracy

Range	Max.	Resolution	Measurement Accuracy	Measurement Current
3 mΩ	3.100 mΩ	1 uΩ	± 1.0 % rdg ± 8dgt	200 mA

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30 mΩ	31.00 mΩ	10 uΩ		20 mA
300 mΩ	310.0 mΩ	100 uΩ	± 0.8 % rdg ± 6dgt	2 mA
3 Ω	3.100 Ω	1 mΩ		2 mA

2.Voltage Measurement Accuracy

Range	Max.	Resolution	Measurement Accuracy
7 V	± 7.100 V	1 mV	± 0.08 % rdg ± 6dgt
100 V	± 100.00 V	10 mV	

3.Temperature Measurement Accuracy

Range	Max.	Resolution	Measurement Accuracy
- 10.0℃ ~ 60.0℃	60.0℃	0.1℃	± 1.0℃

TECHNICAL SPECIFICATION



Power Supply	DC 7.4V, 2600mAh rechargeable lithium-ion battery
Display LCD	5 inch colorful touch screen, resolution 480 x 854
Measurement Range	Internal measurement: 0.000mΩ ~ 3.100Ω
	Voltage measurement: 0.000V ~ 100.00V
	Temperature measurement: - 10.0℃ ~ 60.0℃
Max. Input Voltage	DC 100V (between the + and - measurement terminals), AC input not allowed.
Measurement Method	Internal resistance measurement: 1kHz AC 4-wire test method, open-circuit terminal voltage 3V max
	Current measuring: 2.0mA ~ 200mA (different measuring current for different range)
	Temperature measurement: NTC temperature sensor (10K Ω at 26℃)
	A/D conversion method: Successive approximation type Display update frequency: 5 times/sec
Response Time	200ms
Comparator Function	Yes, setting internal resistance threshold and voltage threshold
Avoid Noise Frequency	920Hz to 1080Hz (automatic frequency conversion)
Line Resistance Zero Calibration	Yes
Hold & Storage Function	Manual hold and store, automatic hold and store
Storage Memory	There are a total of 26 storage groups (A ~ Z), each group can store 1000 records. total 26000 records.
Measurement Judgement Function	Presetting the judgement thresholds for PASS , WARNING and FAIL
Battery Voltage	Battery power display with 5 grids, when battery voltage low will remind to charge in time
Automatic Shutdown	After starting on and 15munits without any operation will automatic shutdown
USB Interface	Equipped with USB interface, storage data can upload to computer saving and printing
Bluetooth Communication	Yes
Power Consumption	300mA MIN / 500mA MAX
Withstand Voltage	AC 3700V/RMS (between circuit and housing)
Suitable Safety Standard	IEC61010
Tester Dimension	263mm x 152mm x 74mm
Tester Weight	Approx. 2.4kg (include accessories)

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ETCR METER[®]

GUANGDONG ETCR ELECTRONIC TECHNOLOGY CO.,LTD.

Accessories

Tester*1PC;
Pin-type test line*1SET;
Clamp-on test line*1SET;
USB communication cable*1PC;
Power adaptor*1PC;
Tool bag*1PC;
Temperature test line*1SET

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