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BATTERY IMPEDANCE TESTER

TM-6002

FEATURES

- Measures internal impedance and open circuit voltage of the secondary batteries, including Nickel-metal Hydride (NiMH), Nickel-cadmium (NiCd), Lithium-ion (Li-ion), Alkaline and Lead-acid batteries.
- AC four-terminal method to measure the internal impedance by eliminating lead impedance and contact impedance to get accurate results.
- Multi-display to show the internal impedance, voltage and clock of the battery simultaneously.
- It has 99 sets of composite comparator function, which can be set at impedance and voltage values to reliably detect battery deterioration.
- 9999 sets of data memory.
- Pin type leads, which can easily contact the battery electrodes are supplied as standard accessory and helps get more accurate 4-terminal measurements.
- An ideal tester for automotive, UPS maintenance and telecommunication applications.

SPECIFICATIONS

General Specifications

- **Measuring method** : Impedance (AC four-terminal method)
- **A/D conversion** : Dual slope method
- **Display** : LCD display and LEDs (comparator output)
- **Sampling rate** : 2 seconds
- **Open-Circuit terminal voltage** : 7.0 Vp-p max.
- **Input over range** : Screen displays “OL”
- **Low power of delection** : Screen displays “ ”.
- **Auto power off** : The meter turns off automatically after about 15 minutes of inactivity; allows user to set the inactive time (01~99 minutes)
- **Comparator settings** : High and Low limits of the comparator impedance and voltage
- **Number of comparator settings** : 99 sets
- **Manual and auto continuous Data logging** : 9999 sets
- **Operation temperature and R.H. value** : 5ºC to 40ºC, 80%RH or less (non-condensation)
- **Operating ambience** : In-door use, under environmental Pollution Grade II
- **Operating attitude** : Max 2000 meters above level
- **Power supply** : AC input Voltage is 100Vac to 240Vac 1.0A with input frequency of 60 HZ or 50HZ, Free Voltage DC output is $9V_{DC}$ ($8\sim11V_{DC}$Max) Supply current : > 1.0ADC. Socket : pin Ground Casing Positive External Diameter 3.5mm internal Diameter 2.0mm.
- **Dimension and weiht** : 240mm (L) x 100mm (W) x 45mm (H) Approximate 700g (including batteries) 0.5A/250V, 3.6ø x
- **Fuse specification** : 10mm
- **Accessories** : One set of Testing Clips, Instruction Manual, Batteries, Software CD, USB Cable, Carrying Case

*Technical Specifications & Appearance are subject to change without prior notice

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ELECTRICAL SPECIFICATIONS

To ensure accuracy the ambient temperature should be 23ºC ± 5ºC with a humidity of 80% RH (maximum) non-condensing. In addition, perform a Zero adjustment after each range change.

Resistance measurements

Temperature coefficient : (±0.1%rdg ±0.5digits)ºC
Measurement current frequency : 1KHZ ±30HZ.
Measurement open-circuit terminal voltage : 7Vp-p

Range	Resolution	Measurement current	Accuracy
40m Ω	10 μΩ	100mA approx	(±0.8% reading ±10 digits)
400mΩ	100 μΩ	15mA approx	
4 Ω	1m Ω	1.5mA approx	
40 Ω	10m Ω	150 μA approx	

Voltage Measurements

Temperature coefficient : (±0.1%rdg ±0.5digits)ºC

Range	Resolution	Accuracy
4V	1mV	(±0.8% reading ±6 digits)
40V	10mV	

Temperature measurement

Measurement Range	Resolution	Accuracy
-20ºC ~ 60ºC (-4ºF ~ 140ºF)	0.1ºC (0.1ºF)	±1.0ºC ±1.8ºF

DC Current (DCA) measurement

Range	Sensitivity	Resolution	Accuracy
700A	0.6A ~ 700.0A	0.1A	(±2.0% reading ±5 digits)

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