ENGLISH

Datasheet

Stock No. 146-6430

RS-33S

Battery Capacity Tester

FEATURES

- The Battery Tester is designed for measuring the internal resistance, open-circuit voltage, and terminal temperature of rechargeable batteries (secondary cells), including lead–acid, Nickel-Cadmium, Lithium-ion and Nickel-metal hydride batteries.
- An AC four-terminal method is used to measure the internal resistance eliminating lead and contact resistances to ensure accurate results.
- 4-wire probe type lead set and 4 wire crocodile clip lead sets are supplied as standard ensuring accurate measurement.
- Simultaneous display of the internal resistance and voltage of the battery under test
- Comparator function compares the measured battery values with user preset high and low limit values and indicates the condition and state of charge of the battery.
- Clamp adaptor for DC current measurements.
- Manual and auto data memory and read stores up to 999 data sets.
- Auto datalogging micro SD CARD 4GB up to 99 blocks.
- USB PC interface

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GENERAL SPECIFICATIONS

- **Measuring method** : Resistance : AC four – terminal method.
  Temperature : NTC thermistor.
  DC current : Hall effect sensor.
- **A/D conversion** : Dual slope method
- **Display** : LCD
- **Sampling rate** : 1.3 sets (resistance, voltage, temperature and DC current measurements)/second.
- **Open-circuit terminal voltage** : 5V max.
- **Input over range** : “OL” display.
- **Low battery detection** : “ BT ” is displayed.
- **Test current fault detection** : “- - - -” display.
- **Auto power off** : If no key operated for 10 minutes.
- **Averaging function** : OFF, 4, 8 or 16 times.
- **Beeper function** : for warning and fail results (can be turned on or off).
- **Comparator settings** : Resistance / Voltage High / Low limits.
- **Number of comparator settings** : 99 sets.
- **Comparator output** : LCD display of PASS, WARNING, or FAIL results and beeper for warning and fail results.

Resistance / Voltage	**Lo**	Middle	**Hi**
Lo	WARNING	WARNING	FAIL
Hi	PASS	WARNING	FAIL

- **Manual and Auto Data memory** : 999 sets (can be read by meter and downloaded by PC).
- **Auto Datalogging** : micro SD CARD 4GB (maximum 99 blocks)
- **Operating environment** : 0 to +40°C 80%RH (non condensing)
- **Storage environment** : -10 to +50°C 80%RH (non condensing
- **Power source**: Meter→ six AA size 1.5V alkaline batteries.
  DCA current adaptor→ one 9V PP3 battery.
- **Maximum power consumption** : 1.0VA
- **Continuous operating time** : 5.5 hours approx.
- **Maximum altitude** : 2000m or less.
- **Size** : Meter→ H198 × D49 × W94mm
  DCA current adaptor → H193 × D31 × W69mm
- **Weight** : Meter → 530g approx. (including batteries)
  DCA current adaptor → 240g approx. (including batteries)
- **Accessories** : Clip – type test lead with temperature sensor, Probe – type test lead, DCA current adaptor, Zero adjustment board, Instruction manual, batteries, AC adaptor, USB cable, CD PC software, Carrying case

ELECTRICAL SPECIFICATIONS

Conditions to guarantee accuracy

Temperature : 23°C ± 5°C

Humidity : 80%RH or less (non condensing).

Temperature coefficient : 0.10 x (specified accuracy) / °C. (<18°C or > 28°C)

Zero adjustment : After zero adjustment for each range.

- **Resistance measurement**

Range	Resolution	Measurement current	Accuracy
4mΩ	1μΩ	40mA approx.	±(3% reading ± 20 digits)
40mΩ	10μΩ	40mA approx.	±(0.8% reading ± 6 digits)
400mΩ	100μΩ	4mA approx.	
4Ω	1mΩ	400μA approx.	
40Ω	10mΩ	40mA approx.	
400Ω	100mΩ	4μA approx.	

Measuring current frequency : 1kHz ± 30Hz

- **Voltage Measurement**

Range	Resolution	Accuracy
6V	1mV	±(0.1% reading ± 6digits)
60V	10mV	

Maximum Input Voltage : 60VDC maximum, No AC voltage input.

CAUTION

Do not exceed the maximum permissible input voltage to the measurement terminal.
This could result in injury or damage to the unit.

- **Temperature Measurement**

Range	Resolution	Accuracy
-20 to +60°C	0.1°C	±1.0°C
-4 to +140°F	0.1°F	±1.8°F

- **DC Current Measurement**

Range	Sensitivity	Resolution	Accuracy
600A	0.6A to 600.0A	0.1A	±(2.0%reading±2digit)