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Simpson

444 Low Voltage Micro-Ohmeter

Measures from 1 Micro-Ohm to 20 Ohms

Many of today's advanced components require an accurate resistance measurement well below the normal range of general purpose instruments. Simpson's high precision Model 444 Micro-Ohmmeter fits this specialized requirement by measuring resistance from 1 micro-ohm to 20 ohms. It makes the measurement by using an extremely small test voltage (100 microvolt maximum) and a four wire measurement technique. The resistance reading is indicated on a 4- 1/2 digit LCD display using one of two measuring modes: An automatic AC measurement mode and a manual DC measurement mode, by limiting the test voltage of the Model 444 to only 100 micro volts, the instrument will not "punch through" contamination or corrosion. An audible tone can be used to indicate resistance values below any selected reading. The Model 444 is powered by either a 120 or 240 AC source or, from self-contained rechargeable Ni-Cad batteries for field use.

- *20,000 Count 4 1/2-Digit LCD*
- *2 Measurement Methods:*
  AC Pulse
  DC Polarity Switching
- *"Punch-Through" Prevention by 100 mV Max. Test Voltage*
- *User-Adjustable, Low-Resistance Alarm*
- *AC Test Mode Cancels Offset Voltages and Thermocouple Effects*
- *Includes Ni-Cad Battery for Field Use and Test Leads*

Specifications

RANGES

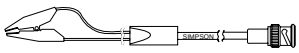
Range	Resolution	Max. Test Current
20mΩ	1 μΩ	5mA
200mΩ	10 μΩ	500 μA
2Ω	100 μΩ	50 μA
20Ω	1mΩ	5 μA

Accuracy: ±(0.05% of input ± 600 counts) DC mode
±(0.05% of input ± 15 counts) AC mode
Alarm: Resistance below set point activates audible beeper and display annunciator. Resistance above set point activates display annunciator.
Set point Adjustment: Front Panel Knob
Accuracy: ± (2% of input +150 counts)
Maximum Test Voltage: 100μV peak
Measurement Techniques: (AC) Pulse, 40 Hertz Square Wave DC Switchable Polarity
Display: 19,999 count LCD with 0.5" digits and "AC," "DC" and " ▲▼ "annunciators
Conversion rate: reading 2 per second
Test Leads: BNC to dual Kelvin clip (2 leads) RG-58
Operating Voltage: 120VAC ± 10%, 240VAC optional, 3VA typical
Operating Temperature Range: 0° to 50°C
Storage Temperature Range: -40° to +60°C
Relative Humidity: 90% maximum up to 35°C,
70% maximum up to +50°C (non-condensing)
Temperature Coefficient: 0.1 times the applicable accuracy specification per °C (0° to 18°C and 28° to 50°C)
Battery Voltage Effect: Plus or Minus (0.15% of input); Fully charged to "B" annunciator displayed
Battery Life: 8 hours typical
Rated Circuit-To-Ground Voltage: 30V (RMS)
Dimensions: 2.7" x 8.4" x 9.0" (68 x 213 x 228 mm) nominal
Weight: Approximately 3 lbs.

Specifications subject to change without notice.

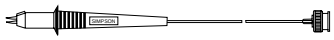
Accessories

Standard Test Lead Set
(Catalog No. 00827)



This test lead set, 1 meter long, consists of RG-58 cable with a BNC connector on one end and a small Kelvin clip on the other end. The Kelvin clip will accept a conductor up to 0.3" diameter.

Kelvin Test Probe Set
(Catalog No. 02151)



The Kelvin probe set consists of RG-174 cable with a BNC connector on one end and a Kelvin probe on the other end. Spring contacts of the Kelvin probe are sharply pointed so they can penetrate corrosion and are very close together, for usage in tight areas.

Case, Accessory #45029

Foam insert protects meter, plastic case resists scratching and scarring.

Ordering Information

MICRO-OHMMETER	Catalog No.	ACCESSORIES	Catalog No.	ACCESSORIES	Catalog No.
444 Micro-Ohmmeter, 120V	12681	Standard Test Lead Set	00827	Case, Molded Plastic	45029
444 Micro-Ohmmeter, 240V	12682	Kelvin Test Probe Set	02151		

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