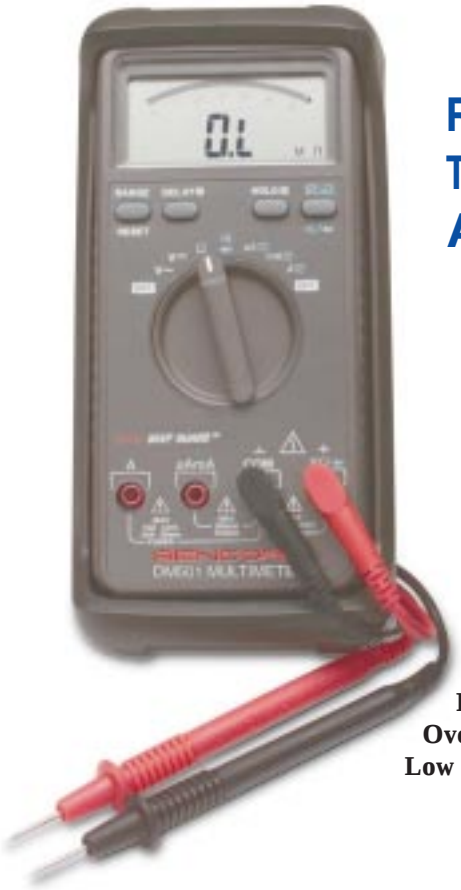
DM501 Digital Multimeter



Rugged, Autoranging Digital Multimeter That Accurately Measures Ohms, DCV, And ACV Including True RMS

- Analog Bar Graph
- Auto or Manual Ranging
- AC/DC Voltage & Current
- Resistance to 30MΩ
- Color Coded Inputs
- True RMS
- Auto Power Off
- Beep Guard™ Input Protection
- Data Hold
- Continuity/Diode Test
- Water Resistant
- Shockproof
- Current up to 20A (limited)
- 1 year limited warranty

General Specifications

Display: Liquid Crystal Display (LCD) with a 65 segment bar graph.
Polarity Indication: Automatic, positive implied, negative indicated.
Overrange Indication: "OL" or "-OL"
Low Battery Indication: " " is displayed when the battery voltage drops below operating range.
Sampling: 2 times/sec for digit. 12 times/sec for analog bar graph.
Auto Power Off: Approx. 10 minutes unless input value changes within a defined time.
Power Requirements: 6LF22, 6AM6, or NEDA 1604A 9V x 1.
Battery Life: Alkaline 350 hours.
Dimensions (HxWxD): 6.9" x 33" x 1.2" (175mm x 84mm x 31mm) without holster
7.6" x 3.7" x 1.9" (192mm x 95mm x 50mm) with holster
Accessories: Test leads, operators manual, and holster.

Electrical Specifications

DC Volts

Range	Resolution	Accuracy	Overvoltage Protection
300mV	100uV	± 0.3%, ± 2 counts	1000 V_{rms}
3V	1mV		
30V	10mV		
300V	100mV		
600V	1V		

Input Impedance: 10MΩ

AC Volts

Range	Resolution	Accuracy	Overvoltage Protection
3V	1mV	± 1.3%, ± 3 counts	1000 V_{rms}
30V	10mV		
300V	100mV		
750V	1V		

Input Impedance: 10MΩ || less than 100pF
Frequency Response: 40Hz ~ 1kHz (40Hz ~ 300Hz for 3V range).
AC Conversion Type: AC conversions are AC-coupled, true RMS responding, calibrated to the RMS value sine wave input, the basic accuracy is for sine waves at full scale and non-sine waves below half-scale (3V range just only for sine wave measurement) for non-sine wave accuracy reference to Crest Factor.
Crest Factor: 1.4 to 2.0, add 0.5% to accuracy
2.0 to 2.5, add 2% to accuracy
2.5 to 3.0, add 4% to accuracy

DC Current

Range	Resolution	Accuracy	Voltage Burden
300uA	0.1uA	± 1%, ± 2 counts	200mV max
3mA	1uA	± 1.2%, ± 2 counts	2V max
30mA	10uA	± 1%, ± 2 counts	200mV max
300mA	0.1mA	± 1.2%, ± 2 counts	2V max
20A	10mA	± 2%, ± 3 counts	2V max

20A Range: 30 seconds maximum above 10A input.
Overload Protection: 1A/500V for uA mA input.
16A/5000V for A input.

AC Current

Range	Resolution	Accuracy	Voltage Burden
300uA	0.1uA	± 1.5%, ± 3 counts	200mV max
3mA	1uA		2V max
30mA	10uA		200mV max
300mA	0.1mA	± 2%, ± 3 counts	2V max
20A	10mA	± 2.5%, ± 3 counts	2V max

Frequency Response: 40Hz ~ 1kHz
20A Range: 30 seconds maximum above 10A
Overload Protection: 1A/500V for uA input.
16A/500V for A input.
AC Conversion Type: AC conversions are AC-coupled, true RMS responding, calibrated to the RMS value sine wave input. The basic accuracy is for sine waves at full scale and non-sine waves below half-scale. For non-sine wave accuracy reference to Crest Factor.
Crest Factor: 1.4 to 2.0, add 0.5% to accuracy
2.0 to 2.5, add 2% to accuracy
2.5 to 3.0, add 4% to accuracy

Resistance

Range	Resolution	Accuracy	Overload Protection
300Ω	0.1Ω	± 0.7%, ± 4 counts	600 VAC_{rms}
3kΩ	1Ω	± 0.5%, ± 2 counts	
30kΩ	10Ω		
300kΩ	100Ω		
3MΩ	1kΩ	± 1.0%, ± 3 counts	
30MΩ	10kΩ	± 2.0%, ± 5 counts	

Open Circuit Voltage: 1.3V approx.

Diode Check and Continuity

Range	Resolution	Accuracy	Max Test Current	Max. Open Circuit Voltage
•))) —▶|—	1mV	± 1.5%, ± 5 counts	1.5mA	3.3V

Overload Protection: 600Vrms max.
Continuity: A tone will sound when resistance is less than 50Ω

Auto Power Off:

The meter will automatically shut itself off after approximately 10 minutes after units initial power on. Unless input changes within a defined time. The meter can be turned back on by pushing the “Reset” button.

Beep Guard™:

A tone will sound if the test lead is connected to the **uAmA** or **A** input terminal but the rotary function selector is not in the **uAmA** or **A** positions.

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