

501 Insulation Tester

The model 501 can be used for general purpose insulation tests that require voltages from 50V to 1000V only.

The Instrument is equipped with AC and DC measuring ranges up to 1000V. This is advantageous for testing for the absence of voltage and the discharge of capacitive devices under test.

The 501 features a quick testing signal lamp within the test probe that illuminates the work area. The signal lamp can also be used for quick Pass/Fail evaluations of insulation resistances. Minimum values for insulation resistances are present if the lamp lights up.

Comes equipped with built-in test probes, an alligator clip, a leatherette carrying case and batteries.



- **Five Test Voltages: 50, 100, 250, 500, and 1000 VDC**
- **Voltage Measurement to 1000 V AC/DC**
- **Test Probe Signal Lamp Illuminates Work Area and Indicates Pass/Fail of Insulation Resistance**
- **Battery Powered with Battery Test and Battery Charge Indicator**
- **Rugged Tester Design for Industrial Applications with Leatherette Carrying Case**

Ordering Information	
Accessories	Catalog Number
501 Insulation Tester, 1000V	12501

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Measuring Ranges			
Insulation Resistance			
Measuring Range	Open-Circuit Voltage U	Internal Resistance R	Lamp in Test Prod Lights for Resistance (1)
0...50KΩ	60V	30KΩ	> 100KΩ
20KΩ...1MΩ		10KΩ	
200KΩ...20MΩ		40KΩ	
0...100KΩ	120V	60KΩ	> 200KΩ
40KΩ...2MΩ		20KΩ	
400KΩ...40MΩ		80KΩ	
0...250KΩ	300V	150KΩ	> 500KΩ
100KΩ...5MΩ		50KΩ	
1MΩ...100MΩ		200KΩ	
0...500KΩ	600V	300KΩ	> 1MΩ
200KΩ...10MΩ		100KΩ	
2MΩ...200MΩ		400KΩ	
0...1MΩ	1200V	600KΩ	> 2MΩ
400KΩ...20MΩ		200KΩ	
4MΩ...400KΩ		800KΩ	
0...4KΩ	9V	-	-
(1) Switching Accuracy			

Direct and Alternating Current				
Measuring Range	Frequency	Internal Resistance	Maximum Overload	Intrinsic Error (1)
0 to 1000V AC/DC	0 or 40 to 200Hz	900KΩ	1200V AC/DC Continuous	± 2.5%
(1) Referring to scale length				
Specifications subject to change without notice				

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Specifications	
REFERENCE CONDITIONS	
Ambient Temperature	73°F (23°C) ± 4°F (2°C)
Relative Humidity	45 to 55%
Measurement Magnitude Frequency	45-65 Hz (voltage measurements)
Line Voltage Waveform	Sine, deviation between effective and rectified value < .5%
Battery Voltage	9V ± .5V
Operating Position	Horizontal
ELECTROMAGNETIC COMPATIBILITY EMC	
Interference Emission	EN 50081-1: 1992
Interference Immunity	EN 50082-1: 1992
ELECTRICAL SAFETY	
Designed to IEC 1010-1 Protection Class	II
Test Voltage	≈ 5.55Kv
Overvoltage Classification	II
Pollution Degree	2
Protection	Housing IP52
AMBIENT CONDITIONS	
Operating Temp. Range	32°F (0°C) to 104°F (40°C)
Storage Temp. Range	-4°F (-20°C) to 140°F (60°C) (without batteries)
Relative Humidity	Max. 45-55%, condensation must be avoided
MECHANICAL DESIGN	
Dimensions	W 6.50" (165mm) x D 4.33" (110mm) x H 4.92" (125mm)
Weight	3.5 lbs. (1.6kg) (with batteries)
POWER SUPPLY	
Standard or Storage Battery	6 ea. 1.5V "D" size batteries
Working Range	7V to 10V
Battery Service Life	Number of possible measurements with 1 set of "D" size batteries (with lamp in test prod switched off): at least 3,000 measurements of an insulation resistance of 1MΩ (Nominal Voltage of 1000 V, 5 sec. Measurement duration, switched off for 25 sec. etc.)

Mouser Electronics

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