

# 250V/500V/1000V Hand-crank Megohmmeters

Models 6501 & 6503

## Practical & Dependable Megohmmeters

- ▶ Test voltages of 250V, 500V and 1000V
- ▶ Insulation measurements up to 200M $\Omega$  and 5000M $\Omega$
- ▶ LED indicates constant voltage output and proper cranked speed controlled by voltage regulator
- ▶ Automatic discharge when measurement is finished
- ▶ Auto-Ranging - dual scale operation for better sensitivity and easier readings
- ▶ Rugged case; O-ring sealed against rain, water and dust; aluminum lid
- ▶ No batteries or AC power required

*Our products are backed by over 100 years of experience in test and measurement equipment, and encompass the latest international standards for quality and safety.*

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INSTRUMENTS  
CHAUVIN ARNOUX GROUP



Model 6503 performing a hand-cranked 1000V test on a generator.

The Model 6501 and 6503 Megohmmeters are compact, self-contained, hand-cranked True Megohmmeters®. These practical and dependable instruments are designed for a broad range of plant and field service applications, such as acceptance testing and preventive maintenance of wiring, cables, switchgear and motors. The easy hand-cranked operation provides a steady DC voltage output across the entire range for consistently reliable readings. In addition to insulation resistance testing at 500V, the Model 6501 also permits resistance testing to 500kΩ and continuity testing to 100Ω.

A 600V voltage measurement is provided to perform safety checks to confirm that the sample is fully discharged and not connected to an energized circuit.

The Model 6503 has three test voltages for insulation resistance testing: 250V, 500V and 1000V. Test voltages are generated in full across the entire measurement range.

Incorporating a built-in sealed generator and constant DC voltage regulated circuit, these megohmmeters provide a very stable resistance reading.

These analog instruments have a unique auto-ranging feature which expands the scale ten times. When the pointer reaches near the end of scale, the auto-ranging feature activates, returning the pointer to the beginning of the scale with the x10 red LED indicator on.

Insulation resistance is indicated with a rugged taut-band meter movement on a logarithmic scale. The indicator scale is large and easy-to-read, and has direct reading on all ranges. An amber (6501) or green (6503) LED on the front panel illuminates when the proper crank speed is attained, indicating the presence of the selected output.

## ▶ FEATURES

- ▶ True Megohmmeter®
- ▶ Test voltages of 250V, 500V and 1000V (instrument dependent)
- ▶ Insulation measurements to 200MΩ and 5000MΩ (instrument dependent)
- ▶ LED indicates constant voltage output and proper cranked speed
- ▶ Automatic discharge when measurement is finished
- ▶ Auto-Ranging – dual scale operation for better sensitivity and easier readings
- ▶ Designed for harsh environments: marine, mining, heavy-duty field, industrial and military use
- ▶ Case; O-ring sealed against rain, water and dust; aluminum lid
- ▶ Compact self-contained package; folded crank
- ▶ Large direct-reading scale no batteries needed

## ▶ APPLICATIONS

- ▶ Acceptance testing and preventive maintenance
- ▶ Test motors, cables, switchgears and electrical wiring installations
- ▶ Continuity checks
- ▶ Check domestic and industrial wiring



Includes test leads, clips, test probe, soft carrying case and user manual.

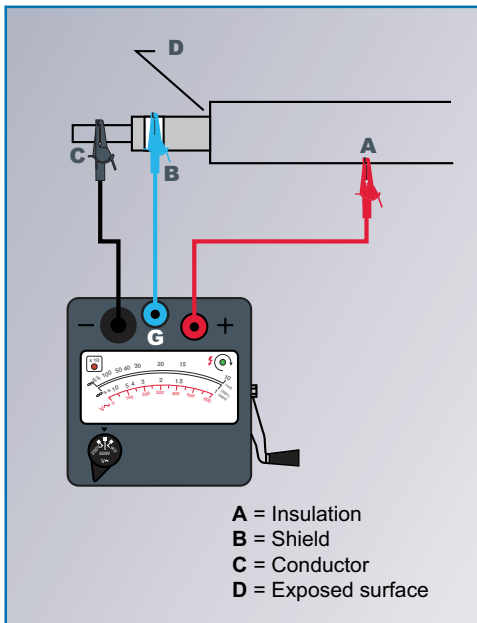
# SPECIFICATIONS

MODELS	6501	6503
<b>ELECTRICAL</b>		
<b>Insulation Tests</b>		
Test Voltage (Auto-Ranging) 250V 500V 1000V	– 0.5 up to 5.5MΩ; 5.5 to 200MΩ –	1 to 11MΩ; 11 to 500MΩ 1 to 11MΩ; 11 to 500MΩ 10 to 110MΩ; 110 to 5000MΩ
Short Circuit Current	5mA (max)	
Accuracy	2.5% of Scale Length	
Automatic Discharge	5s/μF	8s/μF
Charging Time 250V 500V 1000V	– 0.5s/μF –	0.2s/μF 0.5s/μF 0.5s/μF
<b>Resistance Tests</b>		
Measurement Range (Auto-Ranging)	0 to 45kΩ 45 to 500kΩ	–
DC Test Current	1mA constant, 500V max	–
Accuracy	2.5% of Scale Length	–
Charging Time	0.5s/μF	–
Discharging Time (Auto)	5s/μF	8s/μF
<b>Continuity Tests</b>		
Test Voltage	5mA constant, 10V max	–
Measurement Range (Auto-Ranging)	0 to 9Ω; 10 to 100Ω	–
Accuracy	2.5% of Scale Length	–
Fuse Protection	0.2A, 600V, HPC, fast-blow, 5 x 20mm	–
<b>Voltage Tests / Safety Check</b>		
Voltage Range	0 to 600Vac	
Frequency	45 to 450Hz	
Accuracy	3% of Full Scale Length	
Scale	Direct reading on all ranges; 3" (76mm), black on white	Direct reading on MΩ and voltage scales; 3" (76mm), black on white
Test Voltage Indicator	Amber LED indicates proper test voltage and crank speed	Green LED indicates proper test voltage and crank speed
Auto-Range Indicator	Red LED indicates Auto-Range; multiply MΩ, kΩ and Ω readings x 10	Red LED indicates Auto-Range; multiply MΩ readings x 10
Power Source	Hand-cranked, heavy duty alternator and solid state rectification and amplification for stable voltage	
Dielectric Test	2000V, 50/60Hz, between (–), (+), and ground terminals	
Meter Movement	Rugged taut band suspension	
<b>MECHANICAL</b>		
Dimensions	4.7 x 4.4 x 5.3" (120 x 111 x 135mm) with lid	
Weight	2.5 lbs (1.1kg)	
Case	Black case, lid painted safety-yellow, with heavy duty gray polycarbonate front panel; O-ring sealed against water and dust; folding crank	
Degree of Protection	IP54 with cover and IP52 without (IEC 60529 Ed. 92)	
Domain of Reference	23°C ± 3°C	
Terminals	Guard "+" Line (red); "–" earth (black); accepts standard 4mm banana plugs	
<b>SAFETY</b>		
Safety Rating	EN 61010-1, 300V CAT III; 600V CAT II, Pollution Degree 2	
Double Insulation <input type="checkbox"/>	Yes	
CE Mark	Yes; EN 61326-1: 2006	

# CONSTRUCTION



## Utilization of the Guard Terminal (Model 6503)



ORDERING INFORMATION	CATALOG NO.
<b>Megohmmeter Model 6501</b> (Hand-cranked, 500V, 500kΩ, Continuity) .....	<b>Cat. #2126.51</b>
Includes test leads, clips, test probe, soft carrying case and user manual	
<b>Megohmmeter Model 6503</b> (Hand-cranked, 250V, 500V, 1000V) .....	<b>Cat. #2126.52</b>
Includes test leads, clips, test probe, soft carrying case and user manual	

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