

# Hand-cranked Megohmmeter Model 1210N



The AEMC® Model 1210N is a compact, self-contained, hand-cranked True Megohmmeter®. This practical and dependable instrument is 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, rectified DC voltage output across the entire range for consistently reliable readings. In addition to insulation resistance testing at 500V, the Model 1210N also permits resistance testing to 500kΩ and continuity testing to 100Ω. The 600V test voltage range is to perform safety checks to confirm that the sample is fully discharged and not connected to an energized circuit.

The Model 1210N incorporates a built-in sealed alternator and constant DC voltage circuit to provide a very stable resistance reading. The megohmmeter is ruggedly built, with a safety-yellow cast aluminum case, aluminum lid and polycarbonate front panel. The Model 1210N is designed for harsh, heavy-duty use. An O-ring seal between the front panel and case protects the unit against water and dust. The crank folds against the unit for storage.

This analog instrument has 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 LED on the front panel illuminates when the proper crank speed is attained, indicating the presence of the selected output.

The Model 1210N includes a carrying strap with lead pouch, a full complement of test leads, clips and test probe to perform any test.

## Features

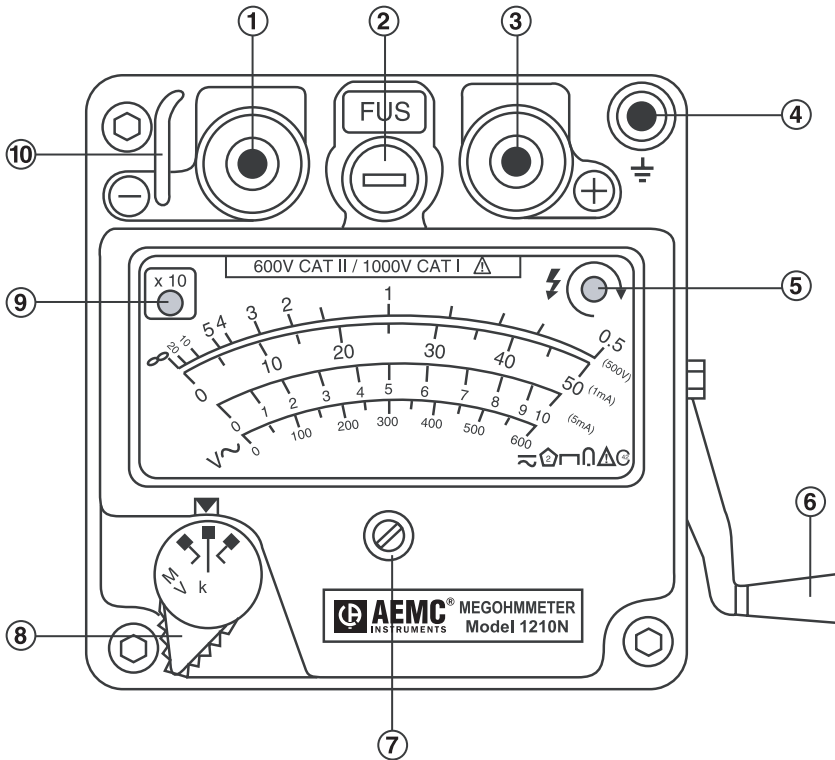
- True Megohmmeter®
- Test voltages to 500V
- Insulation measurements to 200MΩ
- LED indicates constant voltage output and proper cranked speed
- Automatic discharge when measurement is finished
- Auto-Ranging — dual scale operation for better sensitivity and easier readings
- Designed for harsh environments: marine, mining, heavy-duty field, industrial and military use
- Extra rugged cast aluminum case, O-ring sealed against rain, water and dust; aluminum lid
- Compact, self-contained package; folded crank
- Large direct-reading scale
- Includes test leads, clips and test probe
- Double Insulation
- CE Mark

## Applications

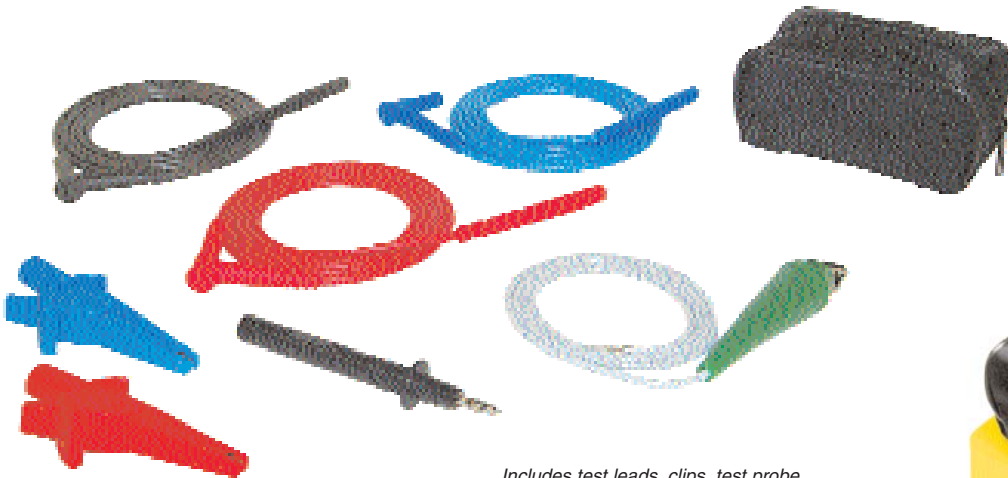
- Acceptance testing and preventive maintenance
- Test motors, cables, switchgears and electrical wiring installations
- Continuity checks
- Check domestic and industrial contracting

## Specifications

MODEL	1210N	
<b>ELECTRICAL</b>		
Power Source	Hand-cranked, heavy duty brushless alternator and solid state rectification and amplification for stable voltage; test voltage reached at 140rpm (approx)	
<b>INSULATION TESTS</b>		
Test Voltage (Auto-Ranging)	500V	0.5 to 5.5MΩ; 5.5 to 200MΩ
Short Circuit Current	5mA (max)	
Accuracy	2.5% of Full Scale Length	
Automatic Discharge	5s/μF	
Charging Time	0.5s/μF	
<b>RESISTANCE TESTS</b>		
Measurement Range (Auto-Ranging)	0 to 45kΩ 45 to 500kΩ	
DC Test Current	1mA constant current	
Accuracy	2.5% of Full Scale	
Charging Time	0.5s/μF	
Discharging Time (Auto)	5s/μF	
<b>CONTINUITY TESTS</b>		
Test Voltage	5mA constant, 10V max	
Measurement Range (Auto-Ranging)	0 to 9Ω; 9 to 100Ω	
Accuracy	2% of Full Scale	
Fuse Protection	0.2A, 250V, fast-blow, 5 x 20mm	
<b>VOLTAGE TESTS</b>		
Voltage Range	0 to 600V <sub>ac</sub>	
Frequency	45 to 450Hz	
Accuracy	3% of Full Scale	
Input Impedance	100kΩ (approx)	
<b>MECHANICAL</b>		
Scale	Direct reading on all ranges; 3" (76mm), black on white	
Test Voltage Indicator	Amber LED indicates proper test voltage and crank speed	
Auto-Range Indicator	Red LED indicates Auto-Range; multiply MΩ, kΩ and Ω readings x 10	
Dielectric Test	2000V, 50/60Hz, between (-), (+) and ground terminals	
Meter Movement	Rugged taut band suspension	
Dimensions	4.7 x 4.7 x 5.1" (120 x 120 x 130mm)	
Weight	3.3 lbs (1.5kg)	
Case	Cast aluminum alloy case and lid painted safety-yellow, with heavy duty gray polycarbonate front panel; O-ring sealed against water and dust; folding crank	
Terminals	Guard "+" Line (red); "-" earth (black); and ground; accept standard 4mm banana plugs	
<b>SAFETY</b>		
Safety Rating	EN 61010-1, 600V, Cat. II; 1000V, Cat. I	
Double Insulation <input type="checkbox"/>	Yes	
CE Mark	Yes	



1. Line (-) terminal Black
2. Fuse 0.2A
3. Earth (+) terminal Red
4. Instrument ground terminal for user safety
5. Amber LED indicates proper crank speed and output voltage
6. Fold-away handle
7. Mechanical zero adjustment screw
8. Range selector switch
9. Red LED illuminates when reading needs to be multiplied 10 to obtain the true value (M $\Omega$ , k $\Omega$ ,  $\Omega$  ranges)
10. Security finger rest isolates users hand from terminals while facilitating a firm grip during an operation



*Includes test leads, clips, test probe (in detachable soft carrying case) and user manual . The case attaches to the carrying strap.*



*Detachable soft carrying case. The case attaches to the carrying strap.*

## ORDERING INFORMATION

## CATALOG NO.

**Megohmmeter Model 1210N** (Hand-cranked, 500V, 500k $\Omega$ , Continuity) . . . . . **Cat. #1326.01**  
 Includes carrying strap with lead pouch, three color-coded leads, ground lead, two alligator clips, test probe and user manual

## Contact Us

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