

# 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 500k  $\Omega$  and continuity testing to 100  $\Omega$ . 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.



*The Right Source For Your Test & Measurement Needs*

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## Features

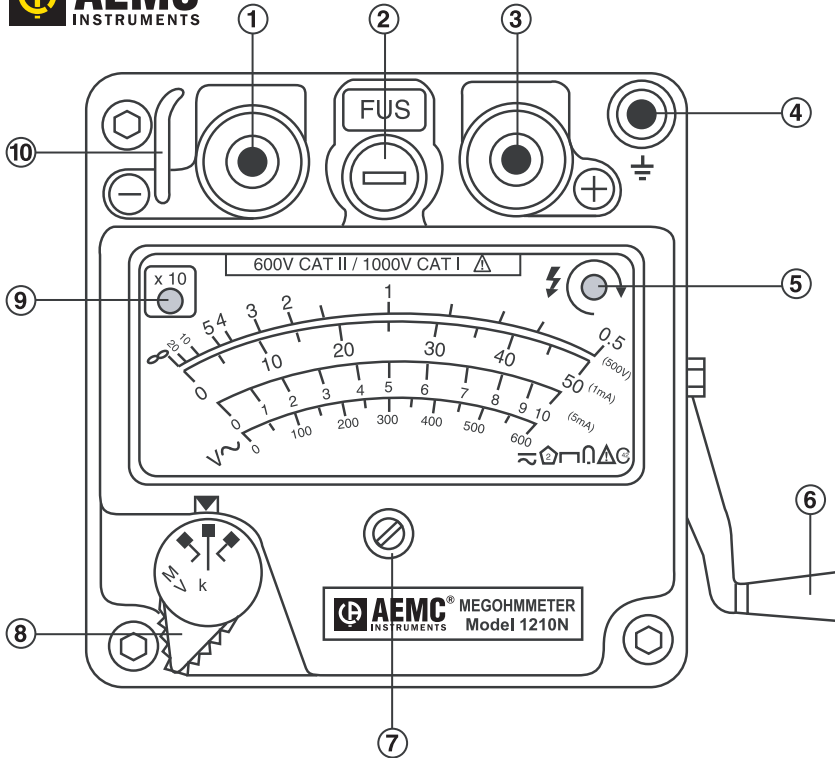
- True Megohmmeter \*
- Test voltages to 500V
- Insulation measurements to 200M $\Omega$
- LED indicates constant voltage output and proper cranked speed
- Automatic discharge when measurement is finished
- Auto-Ranging — dual scale operation for better sensitivity and easier readings
- Designed for 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

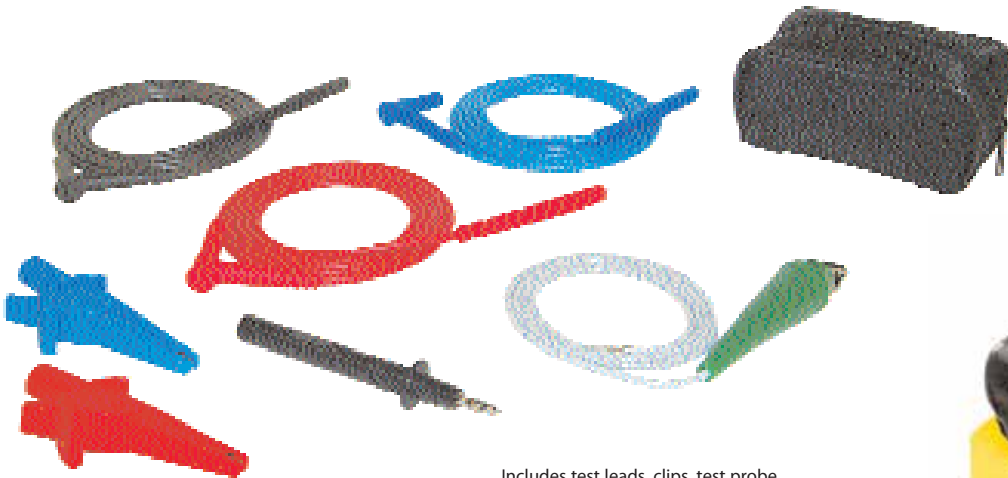
- Acceptance testing and preventive maintenance
- Test motors, cables, switchgears and electrical wiring installations
- Continuity checks
- Check domestic and industrial contracting

## 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 500V (Auto-Ranging)	0.5 to 5.5M $\Omega$ ; 5.5 to 200M $\Omega$
Short Circuit Current	5mA (max)
Accuracy	2.5% of Full Scale Length
Automatic Discharge	5s/ $\mu$ F
Charging Time	0.5s/ $\mu$ F
<b>RESISTANCE TESTS</b>	
Measurement Range (Auto-Ranging)	0 to 45k $\Omega$ 45 to 500k $\Omega$
DC Test Current	1mA constant current
Accuracy	2.5% of Full Scale
Charging Time	0.5s/ $\mu$ F
Discharging Time (Auto)	5s/ $\mu$ F
<b>CONTINUITY TESTS</b>	
Test Voltage	5mA constant, 10V max
Measurement Range (Auto-Ranging)	0 to 9 $\Omega$ ; 9 to 100 $\Omega$
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	100k $\Omega$ (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 M $\Omega$ , k $\Omega$ and $\Omega$ 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 (MΩ, kΩ, Ω 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 Ω, Continuity) .....  
Includes carrying strap with lead pouch, three color-coded leads, ground lead, two alligator clips, test probe and user manual

Cat. #1326.01

