

# Megohmmeter Model 5100



True Megohmmeter® Model 5100 is a portable, multiple-range, high sensitivity megohmmeter capable of measuring a wide range of insulation resistances from 10k $\Omega$  up to 3000G $\Omega$ . The Model 5100 has four test voltages: 500V, 1000V, 2500V and 5000V. Each test voltage setting has two overlapping resistance ranges of 30 to 30,000M $\Omega$  and 3 to 3,000,000M $\Omega$  (3T $\Omega$ ).

The Model 5100 also has a unique low insulation test range of 10 to 30,000k $\Omega$  with a constant current of 33 $\mu$ A (maximum voltage of 1300Vdc), which is useful for testing old or flooded installations. A voltmeter (safety check) with a range of 0 to 600VAc/dc is standard. A guard terminal minimizes surface leakage errors. The 5100 also features a lock-in test button and automatic discharge when the button is released.

The Model 5100 features a digital clock/timer that indicates time and date and allows accurate testing on time-based test applications such as step voltage and dielectric absorption tests. The timer may be programmed: either to indicate the elapsed time of an applied test voltage; or, the time elapsed since the test stopped (discharge time).

An audible signal beeps when the test voltage has been applied and also serves as a time base for tests of long duration. A high voltage indicator on the front panel blinks when the measurement voltage is on the output terminals.

The Model 5100 may be AC or DC powered. DC power is supplied by a 12V rechargeable NiCD battery. The AC supply voltage may be either 110V or 220V, 47 to 450Hz. Indicators on the

front panel display battery status; a green light indicates the battery is charging or unit is being operated from AC supply, while a blinking red light indicates low battery status.

The Model 5100 is specifically designed for field, utility and industrial use, and is built and tested to international safety and environmental standards. The rugged, safety-yellow field case is weatherproof and rainproof when closed. The instrument cover also may be completely removed during operation, if desired.

The Model 5100 is supplied with a set of three leads, hex key, 12V NiCD battery and 110VAc US line cord.

## Features

- True Megohmmeter®
- Test voltage combinations of 500V, 1000V, 2500V and 5000V
- High sensitivity, direct insulation resistance reading to 3,000,000MΩ (3TΩ)
- Lock-in test button for hands-free operation
- Two resistance ranges per test voltage for better accuracy and reading
- Automatic discharge when test button released and voltage indication
- Large, easy-to-read analog scale

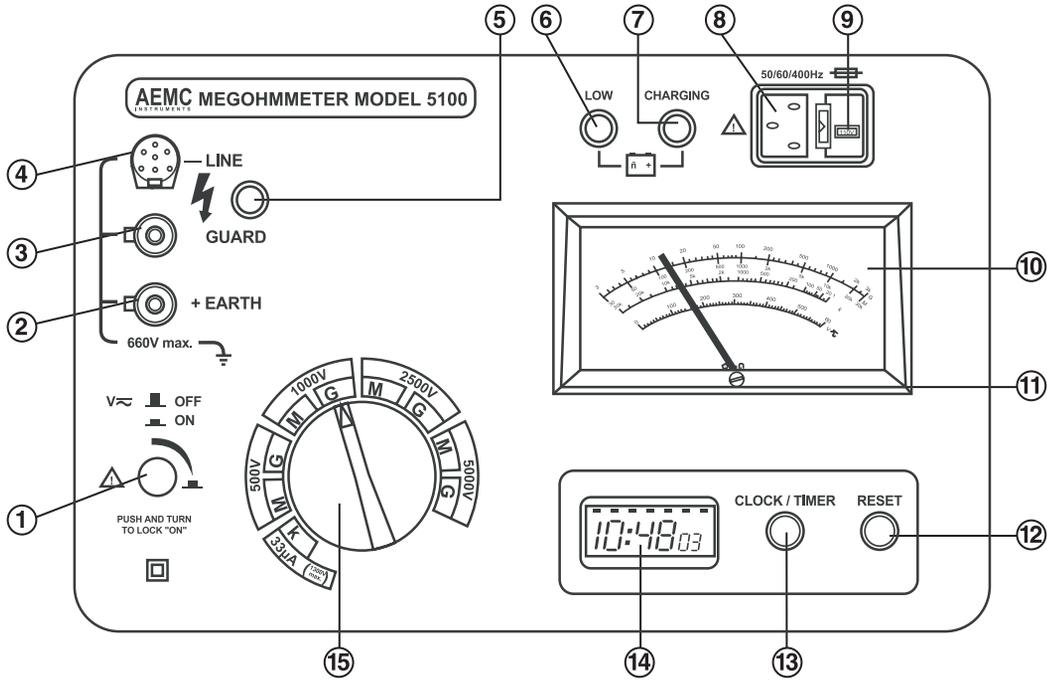
- Voltmeter to 600V for safety check
- 30,000kΩ resistance range
- AC powered with rechargeable NiCD battery
- Built-in clock/timer
- Safety terminals and guard terminal for stable readings
- Low battery indicator
- Test voltage indicator
- CE Mark

## Applications

- Test insulation on cable, transformers, motors, insulators, generators and wiring installations
- Spot reading tests
- Timed resistance or absorption tests
- Dielectric and polarization tests
- Step voltage tests
- Low insulation test range for testing old or flooded installations
- Field, utility and industrial use

## Specifications

MODEL	5100N	
<b>ELECTRICAL</b>		
<b>INSULATION TESTS</b>		
Test Voltage	500V 1000V 2500V 5000V	For each test voltage two direct reading ranges: 30 to 30,000MΩ; 3 to 3,000,000MΩ (3TΩ)
Short Circuit Current	6mA	
Accuracy	±5% of Reading	
Automatic Discharge	When test button is released; 0.1s/μF Discharge voltage displayed on meter	
Charging Time	0.5 to 5s/μF typical	
Voltage Test/Safety Check	0 to 600VAc/dc	
Test Voltage Generation	Solid state circuitry generating rated test voltage across the full range	
<b>RESISTANCE TESTS</b>		
Measurement Range	10 to 30,000kΩ (30MΩ)	
Test Voltage	1300V <sub>Dc</sub>	
Test Current	33μA <sub>Dc</sub>	
Accuracy	±5% of Reading	
<b>GENERAL</b>		
Audible Test Signal	10 beeps per minute (may be disabled)	
Power Source	Rechargeable 12V NiCD battery, AC Supply: 110/220V, 47 to 450Hz AC ± 20% Battery life: 500 to 2500 one-minute tests, Recharging time: 14 hrs (max) for full charge Low battery indicators; Fuse: 3.15A fast blow	
Dielectric Test	4000V <sub>AC</sub> , 60Hz, 1 minute	
Overload	600V <sub>rms</sub> between one terminal and the other two	
Meter Movement/Display	Rugged taut band suspension; 4.4 x 2.2" (112 x 55mm) meter with 4 scales	
Clock/Timer	Test voltage ON activates timer automatically	
Dimensions	9.8 x 10.2 x 15.4" (250 x 260 x 390mm)	
Weight	14.8 lbs (6.7kg)	
Temperature Range	14° to 131°F (-10° to 55°C)	
Case	High impact, fiberglass charged polycarbonate (fire resistant UL 94); sealed and weatherproofed; rainproof when closed	
Terminals	Color-coded safety terminals; guard terminal eliminates surface leakage errors	
<b>SAFETY</b>		
Safety Rating	4000V dielectric test; Double insulation, IEC 348 (Class II); IEC 801-2; IEC 801-3; IEC 801-4; IEC 801-5; IEC 38; Pub. 160; IEC 359; IEC 529; IEC 68.2.6; IEC 68.2.27; IEC 68.2.32; IEC 68.2.31; IEC 68.2.29; UL 94 (fire resistant)	
CE Mark	Yes	



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|---------------------------|------------------------------|----------------------|
| 1. Push button ON/OFF     | 7. Charging light            | 12. Reset button     |
| 2. Earth terminal         | 8. Power line socket         | 13. Clock/timer      |
| 3. Guard terminal         | 9. Fuse socket               | 14. LCD              |
| 4. Line terminal          | 10. Analog measurement scale | 15. Selection switch |
| 5. High voltage indicator | 11. Zero adjust              |                      |
| 6. Low battery indicator  |                              |                      |



*Includes test leads, probe, clip and power cable*

## ORDERING INFORMATION

## CATALOG NO.

**Megohmmeter Model 5100** (Analog, Timer, 500V, 1000V, 2500V, 5000V, 30MΩ minimum) . . . . . **Cat. #1396.07**  
Includes set of leads, hex key, battery, US AC line cord and user manual

## Contact Us

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