1000V Digital/Analog Megohmmeter Models 1050 & 1060

The AEMC Megohmmeter Models 1050 and 1060 are an innovative family of professional 1000V Digital/Analog insulation testers. They are designed to facilitate testing quickly and accurately by incorporating automatic measurement features and user friendly functions.

Measurements are displayed on a large dual-display LCD with bargraph for quick viewing of changes or trends. Resistance readings are displayed on the larger display, and a smaller display is used for test voltage at the sample, test run times (mm:ss), or alarm set points – all accessible at the press of a button. A family of visual indicators for safety and information also compliments the displays. A bright blue electroluminescent back-light makes for clear readings in dark areas.

Both models automatically provide the DAR and PI ratios directly on the display. User defined PI time intervals may also be programmed. The user may even select DAR or PI functions before the test, and the megohmmeter will stop at the appropriate time and display the results. Test run times from 1 second to 59 minutes are also directly programmable. The tested sample Capacitance is available at the end of each insulation resistance test.

For specific applications and operator or equipment safety, test voltages may be disabled to avoid any errors. An automatic test inhibitor prevents testing on live circuits above 25V. Discharge test voltage may be displayed at the completion of each test.

A memory feature in both models permits storing, recalling and displaying of resistance values taken at user specified intervals during a test.

The Model 1060 has an RS-232 interface and a more extensive memory function, which permits the storage of results in files specific to the device under test. Additionally, it also has a built-in document function, which prints out a preformatted report on a serial or parallel printer. A standard software package (DataView®) enables the user to display graphs and results for complete documentation and reporting. The Model 1060 can also be programmed and run by a PC with this software. This enables tailored test programs, remote operation and storing of information directly into a PC.

Both models are built into a double insulated field case with a detachable accessory pouch.

BYRAM LABS
AN ENERGY TECHNOLOGY COMPANY

www.byramlabs.com 1 Columbia Rd Branchburg, NJ 08876 Phone: 800-766-1212 Fax: 908-252-0822

Features

- True Megohmmeter®
- Test voltage combinations of 50V, 100V, 250V, 500V and 1000V
- Insulation measurements to 4000GΩ (4TΩ)
- Direct measurement of DAR and PI values
- Direct measurement of sample Capacitance
- Display of test voltage and run time
- Programmable test run times and PI times
- Smooth and Alarm functions
- Automatic test inhibition (if live sample >25V)
- Automatic discharge after use with voltage display
- Large dual display with time, voltage and measurement
- Bright blue electroluminescent backlight
- Battery powered
- Auto power-down when not in use
- Remote operation with optional test probe
- Rugged dual wall field case with detachable lead/ accessory pouch
- EN 61010-1, 600V Cat. III, EN 61557
- CE Mark

Model 1060 includes these additional features:

- AC rechargeable NiMH batteries – run while recharging
- RS-232 interface for direct printing of results (serial output)
- 128kB memory to store measurements in specific files
- Remote operation of megohmmeter through PC
- Includes DataView® software for data storage, real-time display, analysis and report generation

Applications

- Test insulation on cables, transformers, motors, insulators and wiring installations
- High resistance or absorption tests
- Spot reading tests
- Timed resistance measurements
- Dielectric Absorption Ratio (DAR) and Polarization Index (PI) tests
- Low insulation test range for testing old or flooded installations
- Motor insulation resistance measurements
- Continuity checks and low resistance measurements
- Computer controlled production line testing
- Predictive maintenance by storing results in PC for trend analysis

FUNCTION	MODEL 1050	MODEL 1060
50V (0.002MΩ to 200GΩ)	✓	✓
100V (0.004MΩ to 400GΩ)	✓	✓
250V (0.01MΩ to 1TΩ)	✓	✓
500V (0.02MΩ to 2TΩ)	✓	✓
1000V (40kΩ to 4TΩ)	✓	✓
Voltage Test/Safety Check (600VAC/DC)	✓	✓
Guard Terminal	✓	✓
Continuity (40Ω) @200mA	✓	✓
Resistance (400kΩ)	✓	✓
Lead Compensation	✓	✓
Backlight	✓	✓
Timer (1–59 minutes)	✓	✓
Digital Dual Display	✓	✓
Analog Bargraph	✓	✓
Auto-Off	✓	✓
Continuity Buzzer	✓	✓
Continuity Buzzer Disable	✓	✓
Voltage Detection (>25V)	✓	✓
Safety Test Inhibitor	✓	✓
Automatic Discharge	✓	✓
Rechargable NiMH Battery	–	✓
AC Supply 85-256V/50/60Hz	–	✓
Battery Powered	–	✓
Battery Capacity (%) Indication	✓	✓
Auto-Off Disable	✓	✓
Automatic DAR/PI	✓	✓
Smooth Function	✓	✓
Memory Storage (128kB)	–	✓
Report Printout on Serial Printer	–	✓
RS-232 Communication	–	✓

Model 1060 checking insulation resistance between windings on a three-phase motor.

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Construction

Function buttons (6 on Model 1050) or (8 on Model 1060)

Model 1050 is not equipped with MEM or PRINT buttons

The Models 1050 and 1060 are built into a double insulated field case. This extra rugged construction provides double insulation, maximum field durability and ease of serviceability

Large display and buttons make the Model 1060 ideal for shop use even with gloves.

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Specifications

MODELS	1050	1060
ELECTRICAL		
Insulation Tests		
Test Voltage 50V 100V 250V 500V 1000V	0.002MΩ to 200GΩ 0.004MΩ to 400GΩ 0.01MΩ to 1000GΩ (1TΩ) 0.02MΩ to 2000GΩ (2TΩ) 0.04MΩ to 4000GΩ (4TΩ)	0.002MΩ to 200GΩ 0.004MΩ to 400GΩ 0.01MΩ to 1000GΩ (1TΩ) 0.02MΩ to 2000GΩ (2TΩ) 0.04MΩ to 4000GΩ (4TΩ)
Short Circuit Current	<6mADC	<6mADC
Accuracy 2kΩ to 400GΩ 400GΩ to 4TΩ	±5% of Reading ± 3cts ±5% of Reading ± 10cts	±5% of Reading ± 3cts ±5% of Reading ± 10cts
DAR (1 min/30 sec)	0.000 to 9.999	0.000 to 9.999
PI (10 min/1 min & user programmable)	0.000 to 9.999	0.000 to 9.999
Capacitance Check	0.005 to 4.999µF	0.005 to 4.999µF
Programmable Run Time R(t)	1 to 59 minutes	1 to 59 minutes
Smooth Function	Yes	Yes
Discharge After Test	Yes	Yes
Discharge Voltage Display	Yes	Yes
Voltage Tester/Safety Check	0 to 1000VAC/DC	0 to 1000VAC/DC
Voltage Warning Indicator	>25V	>25V
Test Inhibition	Yes >25V	Yes >25V
Guard Terminal	Yes	Yes
Resistance Tests		
Range	0.01Ω to 400kΩ	0.01Ω to 400kΩ
Test Voltage	12.4VDC max	12.4VDC max
Short Circuit Current	<6mADC	<6mADC
Accuracy	±3% of Reading ± 3cts	±3% of Reading ± 3cts
Continuity Tests		
Range	0.01Ω to 39.99Ω	0.01Ω to 39.99Ω
Test Current	≥200mA from 0.01 to 20.00Ω	≥200mA from 0.01 to 20.00Ω
Accuracy	±3% of Reading ± 4cts	±3% of Reading ± 4cts
Buzzer	Yes	Yes
Power Source	Eight 1.5V C Cells	Rechargeable NiMH batteries AC Supply: 85 to 256VAC (50/60Hz)
MECHANICAL		
Dimensions	9.45 x 7.28 x 4.33" (240 x 185 x 110mm)	9.45 x 7.28 x 4.33" (240 x 185 x 110mm)
Weight	7.5 lb (3.4kg)	7.5 lb (3.4kg)
Protection Index	IP53	IP53
DISPLAY		
Backlight	Blue electroluminescent	Blue electroluminescent
Display Size	4 x 2.25" (102 x 57mm)	4 x 2.25" (102 x 57mm)
Digital Display	Two 4000-count	Two 4000-count
Analog Bargraph	31-segments	31-segments
COMMUNICATION		
Remote Test Probe Operation	Yes (optional)	Yes (optional)
Report Print Out on Printer	No	Preset format
Storage of Readings over Time R(t)	20 Readings	128kB memory
Programmable Reading Intervals	5 sec to 10 min	5 sec to 10 min
Test Voltage Display	Yes	Yes
Elapsed Test Time Display	Yes	Yes
Test Voltage Lock-out	User programmed	User programmed
Storage of Test Results	20 Readings	128kB memory with RS-232
Bi-directional Software	No	Yes , DataView® (included)
PC Operation of Megohmmeter	No	Yes
SAFETY		
Safety Rating	EN 61010-1, 600V Cat. III, EN 61557	EN 61010-1, 600V Cat. III, EN 61557
Double Insulation ⧈	Yes	Yes
CE Mark	Yes	Yes

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Accessories

Detachable accessory pouch includes leads, alligator clips and test probe. Model 1060 pouch also includes cables and US 120V power cord.

The accessory carrying pouch attaches to the lid of the case via four press-on snaps.

PC RS-232, DB9 F/F 6 ft Null Modem Cable
Catalog #2119.45

Cable, PC RS-232
DB9 F/F 6 ft for Model 1060

Remote Test Probe used with Models 1050 or 1060 with target light activated

Remote Test Probe
Catalog #2118.97 (optional)

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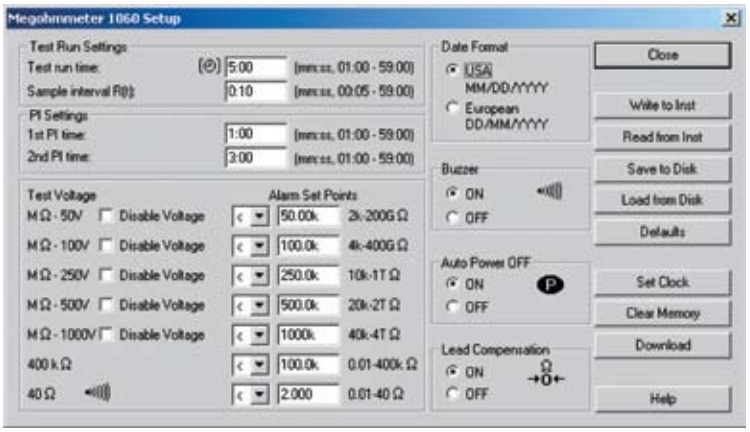
DataView® Software for Model 1060

Model 1060 easily configures land runs right from a PC.



Clear and easy setup from one dialog box.

Features

Configure all functions of the Megohmmeter Model 1060

Print reports of all test results

- Select test voltage and run tests from your computer with a simple click and execute process
- Capture and display data in real time
- Retrieve data from the instrument's memory:
  a. Over 1500 insulation resistance measurements
  b. Over 4000 resistance measurements
- Display DAR and PI ratios
- Plot graphs of manual and timed tests
- Include your analysis in the comments section with the report
- Store a library of setups for different applications

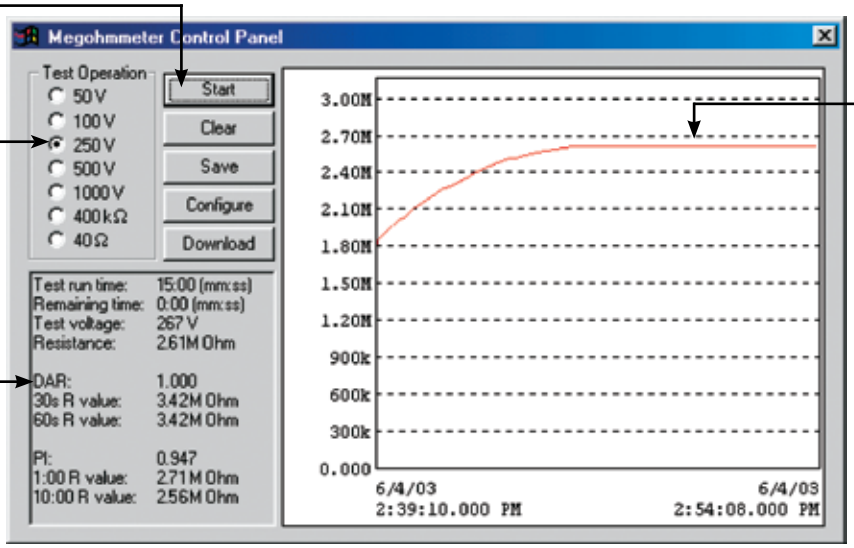
Minimum System Requirements

- Windows® 2000/XP/Vista
- 128MB of RAM for Windows® 2000 (256MB recommended)
  256MB of RAM for Windows® XP
  512MB of RAM for Windows® Vista
- 80MB of hard disk space (200MB recommended)
- CD-ROM Drive

One button operation starts test and graph results

Test voltage selection

Test result status box displays complete test results in real time



Graphic viewing of insulation resistance during the test run

Run test and display results from one dialog box.

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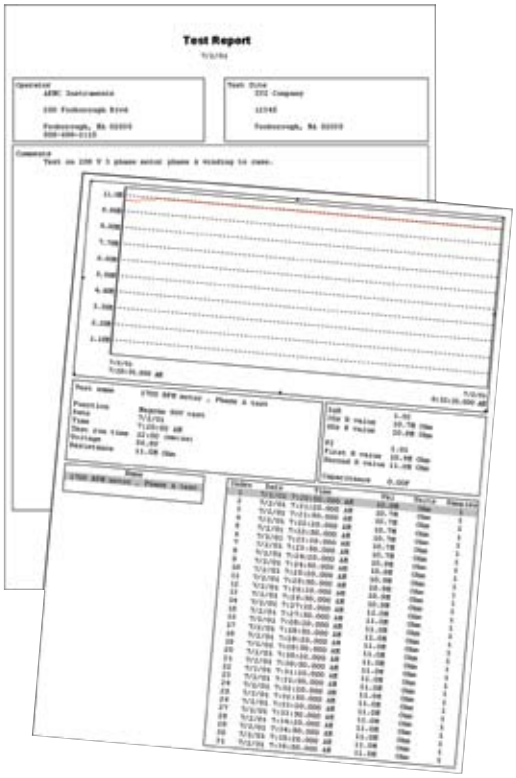
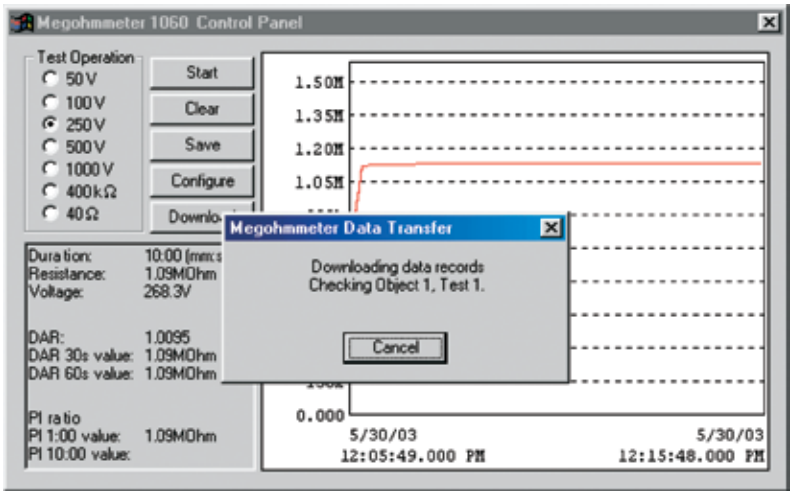
Reports may be displayed on your PC and printed. Each report includes all test results in a tabular and graphic format, as well as operator and test site information. Comments typed in at time of storage will also be included.

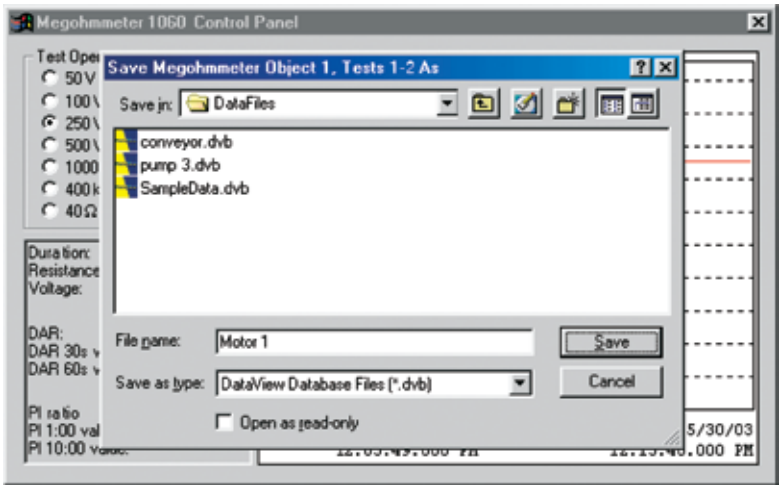




A simple press of the download button from either the setup or run dialog boxes will show all test results stored in the Model 1060.

The DataView® Software provides a convenient way to configure and control Megohmmeter tests from your computer. Through the use of two clear and easy-to-use dialog boxes, all functions of the Model 1060 can be configured and tests can be initiated. Results can be displayed in real time and stored in your PC. Reports can be printed along with the operator's comments and analysis.

DataView® (Catalog #2125.13) is included with the Model 1060.



Each test will be stored as its own file and may be given its own unique file name.

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Model 1060 performing insulation test on contacts of a generator.

Model 1060 checking insulation resistance between windings on a three-phase motor.

ORDERING INFORMATION	CATALOG NO.
Megohmmeter Model 1050 (Digital, with Analog Bargraph, Backlight, Alarm, Timer, 50V, 100V, 250V, 500V, 1000V, Auto DAR/PI, Resistance, Continuity)	**Cat. #2130.01**
Includes detachable accessory pouch (one red, one blue test lead, one black shielded lead, three color-coded (black, red and blue) alligator clips, one black test probe), batteries, spare fuses and user manual	
Megohmmeter Model 1060 (Digital, with Analog Bargraph, Backlight, Alarm, Timer, 50V, 100V, 250V, 500V, 1000V, Auto DAR/PI, Resistance, Continuity, RS-232 with Software, 128kB Memory)	**Cat. #2130.03**
Includes detachable accessory pouch (one red, one blue test lead, one black shielded lead, three color-coded (black, red and blue) alligator clips, one black test probe; one 6 ft RS-232 DB9/DB25 F/F to DB9/DB25 F/F cable, rechargeable battery, DataView® Software, US 120V power cord, spare fuses and user manual	
Accessories (Optional)	
Remote Test Probe	Cat. #2118.97
Cable, PC RS-232, DB9 F/F 6 ft Null Modem Cable.	Cat. #2119.45
Serial Printer Cable RS-232 DB9 F/F 6 ft	Cat. #2119.46

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