

# 1000V DIGITAL/ANALOG MEGOHMMETERS Models 1050 & 1060

*The AEMC® Instruments*

*Digital/Analog*

*Megohmmeter*

*Models 1050 and 1060*

*are the newest in a family  
of full function, professional  
1000V insulation testers.*

*Both models offer fully  
automated test results*

*including DAR, PI,*

*Capacitance and*

*user programmed run*

*times. The Model 1060*

*also offers fully automatic  
report generation.*



- ▶ Test voltages of 50V, 100V, 250V, 500V and 1000V
- ▶ Measures insulation resistance from 2k $\Omega$  to 4T $\Omega$
- ▶ Automatic DAR, PI and Capacitance measurement
- ▶ Automatic discharge and display of voltage
- ▶ Programmable test run time
- ▶ Dual digital display with analog bargraph
- ▶ Display resistance, test voltage, run time
- ▶ Automatic test inhibit if live voltage detected (>25V)
- ▶ 128k memory for extensive field tests (Model 1060)
- ▶ RS-232 interface with software (Model 1060) for control and printout
- ▶ Built-in print function for automatic report generation (Model 1060)
- ▶ Remote operation from PC (Model 1060)
- ▶ Optional remote test probe with target light
- ▶ IEC 61010-1, 600V, Cat. III



Model 1060 easily configures and runs right from a PC.

The AEMC Megohmmeter Models 1050 and 1060 are the newest in an innovative family of professional 1000V Digital/Analog insulation testers. They were designed to facilitate testing 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 compliment these displays. A bright blue electroluminescent backlight 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 and discharge test voltage may be displayed.

A memory feature in both models permits storage, 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™ Lite) 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 lead/accessory carrying pouch.

# 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
- IEC 61010-1, 600V, Cat. III

## MODEL 1060 INCLUDES THESE ADDITIONAL FEATURES:

- AC powered with rechargeable NiMH batteries
- 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 software to configure instrument and generate reports

# APPLICATIONS

- Test insulation on cables, transformers, motors, insulators and wiring installations
- High resistance or absorption tests
- Spot reading tests
- Timed resistance measurements
- Dielectric (DAR) and polarization tests (PI)
- 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



*Model 1060 checking insulation resistance between windings on a 3 phase motor.*



*Model 1060 performing insulation test on contacts of a generator.*

# SOFTWARE

## DATAVIEW™ LITE SOFTWARE FOR MODEL 1060

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:
  - Over 1500 insulation resistance measurements
  - 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 set-ups for different applications

### MINIMUM SYSTEM REQUIREMENTS:

- Windows®95, Windows®98, Windows®NT or Windows®2000/ME
- 16MB of RAM (32MB recommended)
- 35MB of hard disk space (100MB recommended)
- CD Rom drive

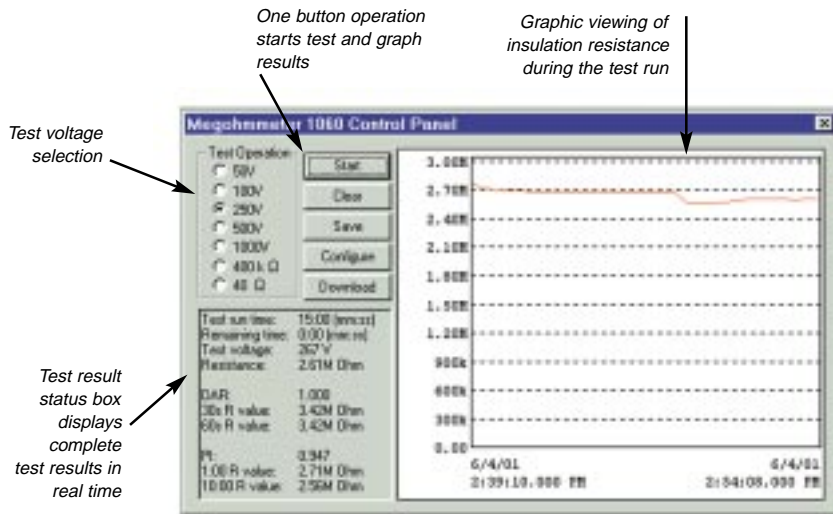
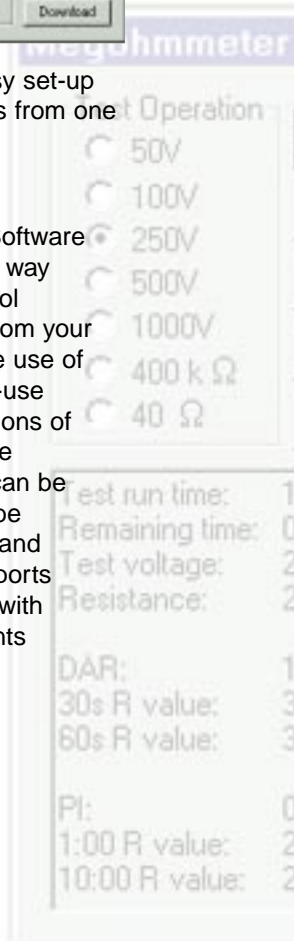


Clear and easy set-up of all functions from one dialog box.



DataView™ Lite (Catalog #2125.12) is included with the Model 1060

The DataView™ Lite 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 may be printed along with the operators comments and analysis.

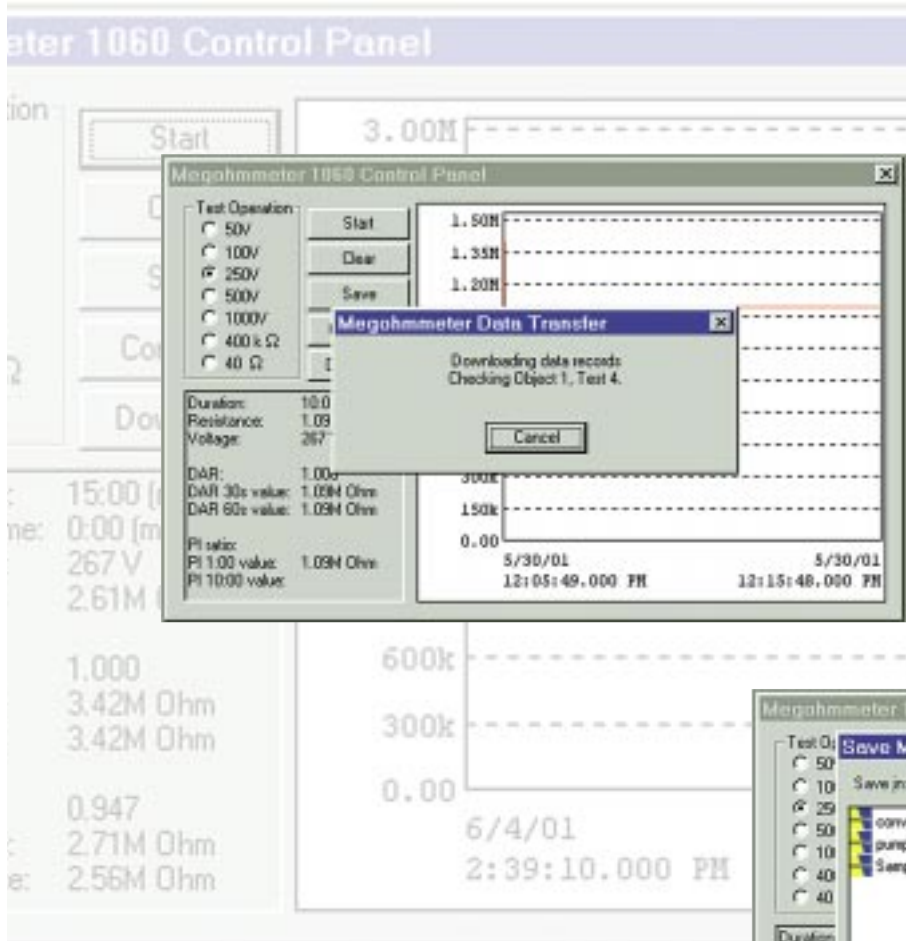


Run test and display results from one dialog box.

## Automatic Report Generation

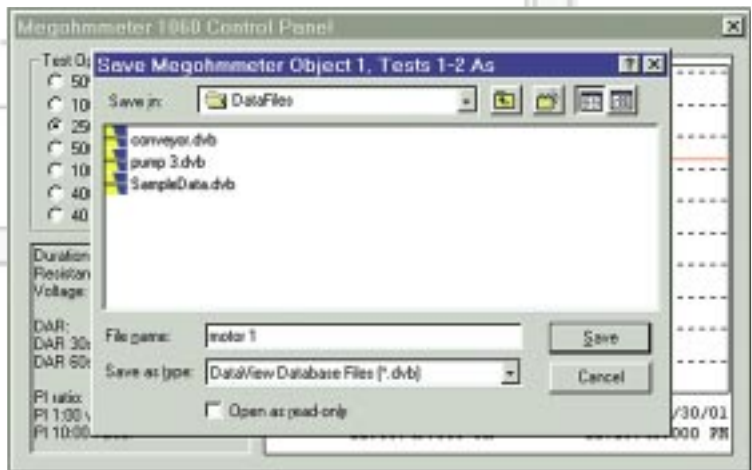
Reports may be displayed on your PC and printed out. Each report includes all test results in a tabular and graphic format, as well as operator and test site information.

Comments typed in at time of storage will also be included.



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

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



# SPECIFICATIONS

## GENERAL PURPOSE

MODELS	1050	1060
<b>INSULATION TESTS</b>		
Test Voltage/Range	50V 100V 250V 500V 1000V	2k $\Omega$ to 200G $\Omega$ 4k $\Omega$ to 400G $\Omega$ 10k $\Omega$ to 1000G $\Omega$ (1T $\Omega$ ) 20k $\Omega$ to 2000G $\Omega$ (2T $\Omega$ ) 40k $\Omega$ to 4000G $\Omega$ (4T $\Omega$ )
Short Circuit Current	< 6mA <sub>dc</sub>	
Accuracy	±5% Reading + 3cts (2k $\Omega$ to 40G $\Omega$ )	
DAR (1 min/30 sec)	0.000 to 9.999	
PI (10 min/1 min & user programmable)	0.000 to 9.999	
Capacitance Check	0.005 to 4.999 $\mu$ F	
Programmable Run Time R(t)	1 to 59 minutes	
Smooth Function	Yes	
Discharge After Test	Yes	
Discharge Voltage Display	Yes	
Voltage Tester/Safety Check	0 to 1000V <sub>ac/dc</sub>	
Voltage Warning Indicator	Yes if >25V	
Test Inhibition	Yes >25V	
Guard Terminal	Yes	
<b>RESISTANCE TESTS</b>		
Range	0.01 $\Omega$ to 400k $\Omega$	
Test Voltage	12.4V <sub>dc</sub> max	
Accuracy	±3% Reading + 3cts	
<b>CONTINUITY TESTS</b>		
Range	0.01 $\Omega$ to 39.99 $\Omega$	
Test Current	≥200mA from 0.01 to 20.00 $\Omega$ and >140mA from 20.01 to 39.99 $\Omega$	
Accuracy	±3% Reading + 4cts	
Buzzer	Yes	
<b>DISPLAY</b>		
Backlight	Yes, Electroluminescent Blue	
Display Size	4 x 2-1/4" (102 x 57mm)	
Digital Display	Two 4000-count displays	
Analog Bargraph	31-segments	
<b>GENERAL</b>		
Power Source	8 x 1.5V C cells	NiMH batteries 85 to 256V <sub>ac</sub> (50/60Hz)
Dimensions	9.45 x 7.28 x 4.33" (240 x 185 x 110mm)	
Weight	7.5 lb (3.4kg)	
Protection Index	IP53	
<b>OTHER SPECIFICATIONS</b>		
Remote Test Probe Operation	Yes (optional)	
Report Print Out on Printer	No	Yes – format preset
Storage of Readings over Time R(t)	Yes (20 Readings)	Yes (128k memory)
Programmable Reading Intervals	Yes (5 sec to 10 min)	Yes (5 sec to 10 min)
Test Voltage Display	Yes	
Elapsed Test Time Display	Yes	
Test Voltage Lock-out	Yes, user programmed	
Storage of Test Results	20 Readings	128k memory with RS-232
Bi-directional Software	No	Yes (included)
PC Operation of Megohmmeter	No	Yes
<b>SAFETY</b>		
	IEC 61010-1 + A2, 600V, Cat. III	
CE Mark	Yes	

# ACCESSORIES



Model 1060 with attached accessory pouch, leads, alligator clips, probe and cables



The accessory carrying pouch attaches itself to the lid of the case via 4 press-on snaps.



Cable, PC RS-232, DB9/DB25 F/F to DB9/DB25 F/F 5 ft  
Catalog #2119.47  
for Model 1060 (included)



Remote Test Probe  
Catalog #2118.97 (optional)

Target Light  
Probe



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

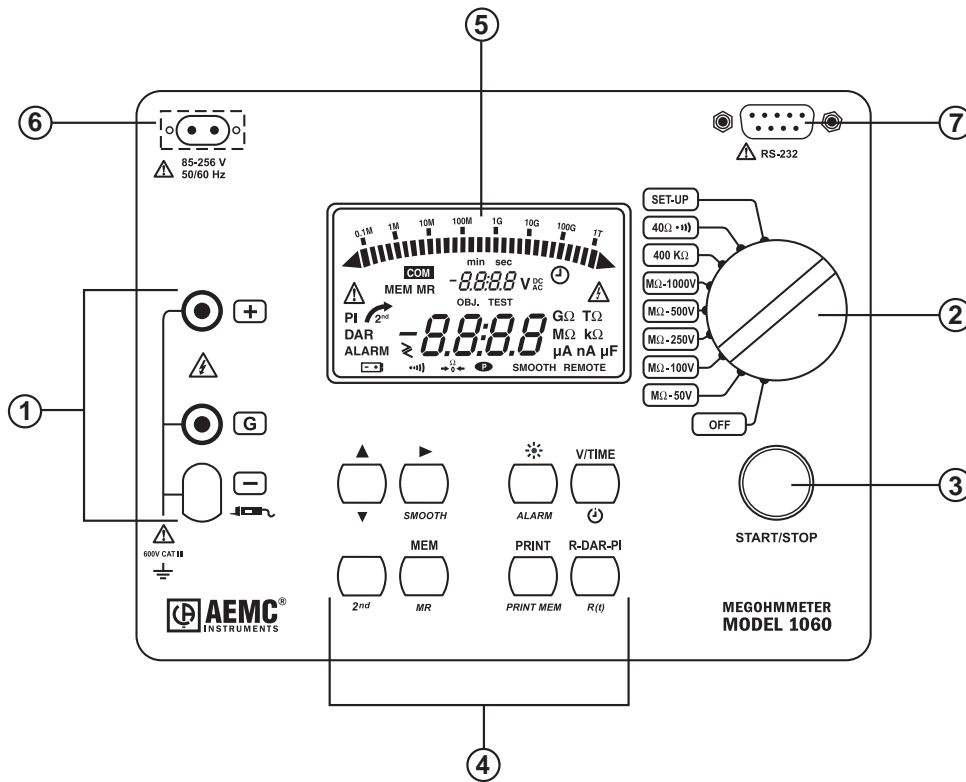


Cable RS-232 DB9 F/F 6 ft  
Catalog #2119.46  
for Model 1060 (included)

Remote Test Button



# ORDERING INFORMATION



Front panel layout

1. Safety terminals "+", "G" and "-"
2. Rotary selection switch
3. Start/Stop button
4. Function buttons (6 on Model 1050)\* or (8 on Model 1060)
5. Back-lit dual liquid crystal display
6. AC power plug (Model 1060) (direct operation on AC and battery recharge)
7. RS-232 serial interface male plug (9 pin) for connection to a PC or printer (Model 1060)

\*Model 1050 is not equipped with MEM or PRINT buttons.

## ORDERING INFORMATION

## CATALOG NO.

<b>Megohmmeter Model 1050</b> (Digital, Bargraph, Backlight, Alarm, Timer, 50V, 100V, 250V, 500V, 1000V, Auto DAR/PI, Resistance, Continuity) . . . . .	<b>Cat. #2130.01</b>
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	
<b>Megohmmeter Model 1060</b> (Digital, Bargraph, Backlight, Alarm, Timer, 50V, 100V, 250V, 500V, 1000V, Auto DAR/PI, Resistance, Continuity, RS-232 w/DataView™ Lite Software). . . . .	<b>Cat. #2130.03</b>
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™ Lite software, US 120V power cord, spare fuses and user manual	
<b>Accessories (Optional)</b>	
Remote Test Probe . . . . .	Cat. #2118.97
Converter, Serial-to-Parallel (RS-232/Centronics) . . . . .	Cat. #2119.62



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