10A Micro-Ohmmeter
Model 6250

The 10A Micro-Ohmmeter Model 6250 is a rugged, low resistance tester designed for plant maintenance, quality control in manufacturing and field use. Utilizing a four-lead Kelvin method of testing, the Model 6250 is one of the more accurate Micro-Ohmmeters available, with results within 0.05% accuracy.

Resistance measurements are automatically calculated and displayed, taking into account the measurement value, ambient temperature, reference temperature and metal temperature coefficient. Sample temperature can be manually entered by the operator or directly measured by the Model 6250 with an external RTD temperature probe.

The Model 6250 is uniquely designed to conduct tests on both resistive and inductive material, with operator selection directly from the front panel. Three test modes are available and automatically employed based on this selection:

Resistive materials (i.e. ground bonding, coatings, contact resistances) are tested with an instantaneous test. Simply press the test button – the reading is taken and the test is concluded.

Inductive materials (i.e. coils, transformers, motor windings) are tested with a continuous test. The test is started and stopped by the operator at the push of a button.

Auto test mode is designed for multiple test points on resistive and/or low inductance material. The test is started at the press of a button. As the operator moves the probe from one point to another, the test is stopped, the results are displayed and a new test is started when the test probes again make contact – no need to press the test button! Residual voltage is measured between tests to ensure proper results. This test mode continues until the operator presses the button to conclude the testing.

The large, easy-to-read display shows the resistance measurement, ambient and reference temperatures, metal type and test method, as well as alarm conditions and memory utilization, all in real time. Previously stored test results can easily be called up for review on the display or sent directly to a printer or remote terminal.

Two programmable alarm set points are available. Each can be either active high or low and will sound an alarm when tripped, further adding to the ease of use by permitting quick Pass/Fail measurements.

External trigger operation is available through the communication port allowing the test to be conducted from a remote location.

The list of features and functions goes on and on. The Model 6250 will be a valuable asset for your bond testing, coil and contact testing as well as coatings and connector or any other low resistance testing application.

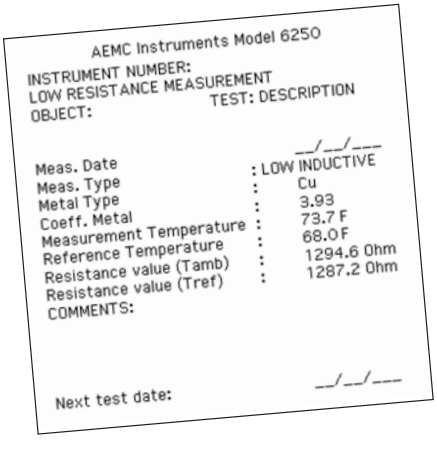
Features

- Measure from 0.0001mΩ (0.1μΩ resolution) to 2500.0Ω
- Test current selection of 1mA, 10mA, 100mA, 1A and 10A
- RTD temperature probe to check tested sample (optional)
- Selectable metal types
- Automatic and manual temperature correction
- EMF levels measured and eliminated in measurement
- Two programmable alarm set points
- Stores up to 1500 test results
- Selectable Inductive or Resistive test modes
- Automatic multiple test mode (multiple tests without pressing the test button)
- Large multi-line electroluminescent display
- Local or remote test setup and control
- Direct printout
- Internal rechargeable batteries – conduct up to 5000 10A tests
- Rugged, double insulated waterproof case
- CE Mark

Applications

- Aerospace metallic coating resistance measurement
- Winding resistance measurement of motors and transformers
- Bonding verification on earth/ ground systems
- Weld joint integrity verification
- Contact resistance measurement of breakers and switchgear
- Aircraft and rail bonding checks
- Wire to terminal connections and resistance checks
- Battery strap resistance checks
- Cable joint and bus bar connection checks
- Mechanical bond tests

Verifying rail bonds with the Model 6250



AEMC Instruments Model 6250

INSTRUMENT NUMBER:
LOW RESISTANCE MEASUREMENT
OBJECT: TEST: DESCRIPTION

Meas. Date	:	__/__/___
Meas. Type	:	LOW INDUCTIVE
Metal Type	:	Cu
Coeff. Metal	:	3.93
Measurement Temperature	:	73.7 F
Reference Temperature	:	68.0 F
Resistance value (Tamb)	:	1294.6 Ohm
Resistance value (Tref)	:	1287.2 Ohm

COMMENTS:

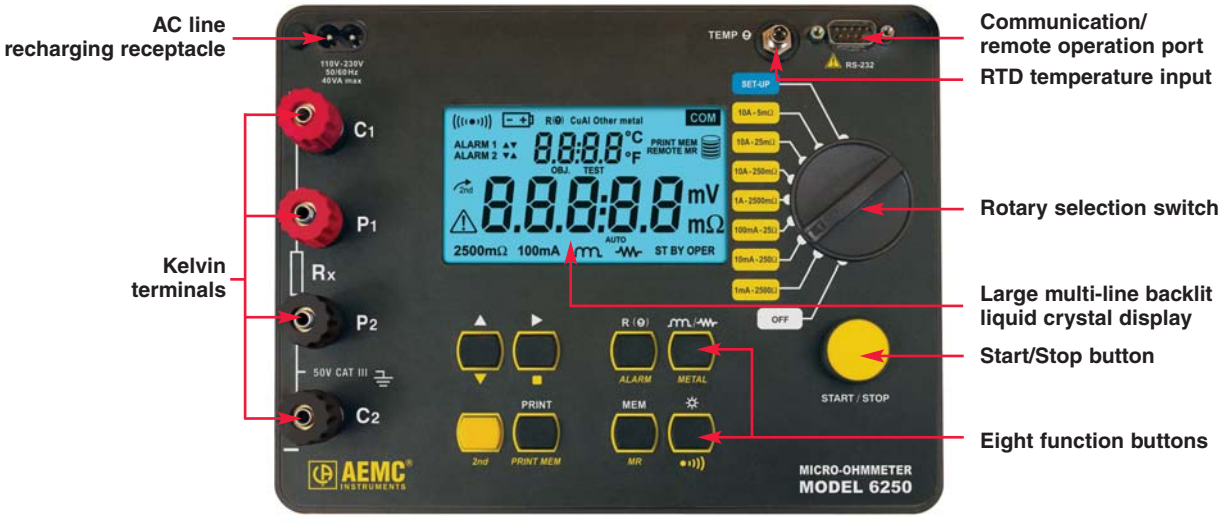
Next test date: __/__/___

Report printouts of the current measurement or any measurement stored in memory is quick and easy. Connect the printer to the interface port and press the PRINT button – it's that simple. All measurement results are printed.

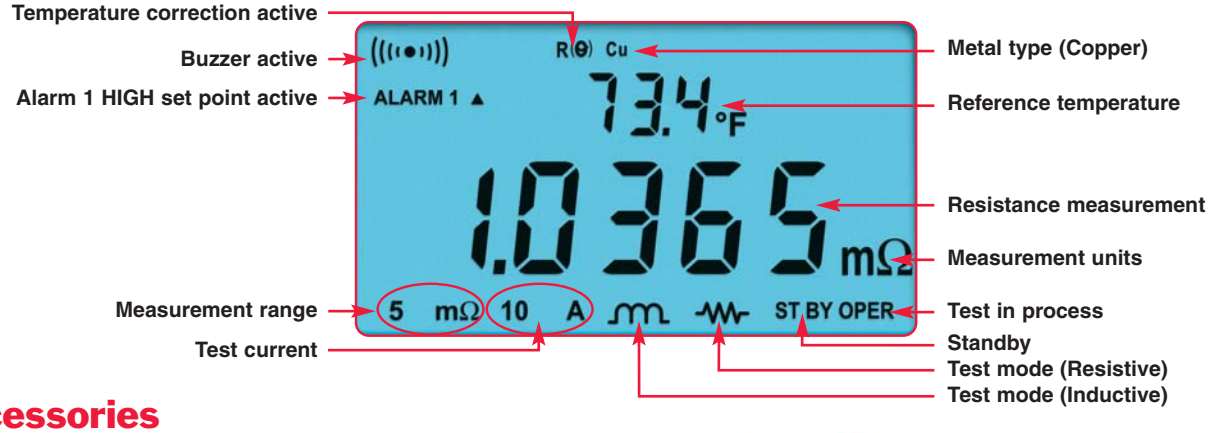
Specifications

MODEL	6250						
ELECTRICAL							
Range	5.0000mΩ	25.000mΩ	250.00mΩ	2500.0mΩ	25.000Ω	250.00Ω	2500.0Ω
Accuracy	0.05% + 0.5μΩ	0.05% + 3μΩ	0.05% + 30μΩ	0.05% + 0.3mΩ	0.05% + 3mΩ	0.05% + 30mΩ	0.05% + 300mΩ
Resolution	0.1μΩ	1μΩ	10μΩ	0.1mΩ	1mΩ	10mΩ	100mΩ
Test Current	10A	10A	10A	1A	100mA	10mA	1mA
Measurement Mode	Selectable: Inductive (continuous test), Resistive (instantaneous test) or Auto (multiple tests)						
Metal Type Alpha	Selectable: Copper, Aluminum or Other Metal Programmable from 000.00 to 99.99						
Temperature Correction Reference Temperature Ambient Temperature	Manual or Automatic with 0.1° resolution Programmable from 32° to 130°F or -10° to 130°C Programmable from 32° to 130°F or -10° to 130°C						
Temperature Probe Resolution Accuracy	100Ω platinum RTD 0.1°F (0.1°C) ±0.9°F (±0.5°C)						
Alarms	Two – programmable set points from 0.0 to 2500.0Ω						
Buzzer	Programmable ON/OFF and volume level						
Power Source	Rechargeable 6V, 8.5 Ah NiMH batteries;						
Battery Life	Approximately 5000 10A tests						
Battery Charging	120/240VAC ± 20% (45 to 400Hz) line voltage						
Power Management	Display powers down after 1, 5 or 10 minutes of inactivity (operator selectable)						
Low Battery Indication	[– +] is displayed when battery voltage is low						
Memory	Stores up to 1500 test results Data in memory can be reviewed on the instrument display, on a PC or via direct printout						
MECHANICAL							
Dimensions	10.63 x 9.84 x 7.09" (270 x 250 x 180mm)						
Weight	8.1 lbs (3.69kg)						
Index of Protection	IP53 (case open); IP64 (case closed)						
DISPLAY							
Display Type	Large 50,000-count digital						
Size	4 x 2.25" (102 x 57mm)						
Backlight	Blue electroluminescent						
Color	Safety yellow case; gray faceplate						
COMMUNICATION							
Interface Port	PC, remote terminal, printer or trigger test from remote contact closure						
ENVIRONMENTAL							
Operating Temperature	14° to 132°F (-10° to 55°C); 10 to 80% RH (non-condensing)						
Storage Temperature	-40° to 140°F (-40° to 60°C)						
SAFETY							
Safety Rating	EN 61010-1, 50V Cat. III						
Double Insulation ⧈	Yes						
CE Mark	Yes						

Construction



Functional Display



Accessories

Kelvin probes, set of two, spring loaded
(10A) 10 ft Catalog #1017.82
(1A) 20 ft Catalog #2118.52

Kelvin clips, set of two,
(1A) 10 ft Catalog #1017.83

Kelvin clips, set of two,
(10A) 10 ft Catalog #1017.84

RTD Temperature Probe with 7 ft extension cable
Catalog #2129.96

ORDERING INFORMATION — CATALOG NO.

10A Micro-Ohmmeter Model 6250 ..... **Cat. #2129.81**
Includes NiMH rechargeable 6V battery pack, set of two Kelvin clips (10A) 10 ft, US 120V power cord, carrying bag and user manual

Accessories (Optional)

Kelvin Probes (10A), set of two, spring loaded, 10 ft ..... Cat. #1017.82
Kelvin Clips (1A), set of two, 10 ft ..... Cat. #1017.83
Kelvin Clips (10A), set of two, 10 ft ..... Cat. #1017.84
Kelvin Probes (1A), set of two, spring loaded, 20 ft ..... Cat. #2118.52
RTD Temperature Probe (plug into faceplate for ambient temperature) ..... Cat. #2129.95
RTD Temperature Probe with 7 ft extension cable ..... Cat. #2129.96

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