

ALTEK

# AUTORANGING INSULATION TESTER MODEL 530

- 4000 COUNT ( $3\frac{3}{4}$  digits) DIGITAL DISPLAY
- 50 SEGMENT ANALOG SCALE
- BACKLIT DISPLAY
- TEST VOLTAGES FROM 250 to 1000 VDC
- AUTORANGING INSULATION RESISTANCE MEASUREMENT TO  $4000M\Omega$  ON DIGITAL DISPLAY AND  $10G\Omega$  ( $10,000M\Omega$ ) ON ANALOG SCALE
- AC VOLTAGE CHECK TO 600V
- BATTERY POWERED AND AUTO OFF
- LOCKING TEST BUTTON FOR DIELECTRIC ABSORPTION TESTING
- RS-232 INTERFACE FOR RECORDING DATA
- AUTOMATIC DISCHARGE OF ITEM UNDER TEST
- DESIGNED TO IEC 61010-1 SAFETY STANDARDS



DATA SHEET 530

## GENERAL INFORMATION

### Testing Insulation

Virtually everywhere you go, electric wire can be found. Motors, transformers, generators, cables, etc. all have wiring covered with some type of insulating material. A variety of problems can occur if the insulation is allowed to deteriorate. The most common causes of deterioration in insulation are caused by environmental and/or physical damage. Moisture and extremes in temperature, vibration, abrasions, cuts or other mechanical damage, dust, dirt, grease or oil, plus normal electrical stress all contribute. The best way to evaluate insulation quality is to take measurements at regularly scheduled intervals so trends can be monitored. Planned reconditioning of motors and equipment can then be accomplished without risk of serious injury or catastrophic failures in your manufacturing process.

### Autoranging Insulation Tester

The Altek Model 530 is an autoranging insulation tester. Use the 530 as the standard tool for testing

your insulation. The reliable, straightforward megohmmeter is simple to use and easy to read. The quality backlight illuminates the display, making it easy to read even in the dark. The 530 provides its rated test voltages into a 1mA load, so you're sure that the full voltage is applied to the tested device. The instrument also offers continuity testing, with a short circuit current of at least 200mA and an open circuit voltage of 12.8V for your safety.

### Data Logging

If record keeping is important to you, use the RS-232 serial port and the provided software on a Windows based computer to record your measurements. The insulation tester will automatically power off after 30 minutes of inactivity to preserve battery life.

The 530 can be used for routine preventive maintenance as well as acceptance testing, QA testing in manufacturing, and diagnostic testing.

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## SPECIFICATIONS

Unless otherwise indicated, specifications are for 1 year in  $\pm$ (% of reading + number of digits) @ 23°C

### General

**Display:** 3.1" x 2.0" LCD. 3 <sup>3</sup>/<sub>4</sub> digits (4,000 counts) Digital readout with an analog bar indication. Backlighting available

**Measurement Range:** 600VAC, 40Ω, 4000MΩ/250V, 4000MΩ/500V, 4000MΩ/1000V

**Sampling Rate:** 2.5 times/second for digital reading  
10 times/second for analog indication

**Auto Power Off:** Approx. 30 minutes of inactivity

**Over Range Indicator:** OL will be displayed

**Operating Temperature Range:** 32°F to 104°F (0°C to 40°C)

**Storage Temperature Range:** 14°F to 140°F (-10°C to 60°C)

**Operating Relative Humidity:** 0% to 80% (noncondensing)

**Storage Relative Humidity:** 0% to 70% (noncondensing)

**Altitude Range:** Up to 6,500 feet

**Power Supply:** 12VDC, (8 x 1.5V Size "AA" batteries)

**Power Consumption:**

Approx. 90mA (4000MΩ/1000V range) (output open circuit)

Approx. 60mA (4000MΩ/500V range) (output open circuit)

Approx. 45mA (4000MΩ/250V range) (output open circuit)

Approx. 20mA (ACV and OHMS range)

**Safety Standards:** Designed to IEC 61010-1

**Overall Size:** 7.5"L x 5.5"W x 3.0"H (190mm x 140mm x 77mm)

**Weight:** Approx. 2Lbs (900g), includes battery

*Specifications subject to change without notice*

### OHMS & Continuity Beeper

Range	Resolution	Accuracy	Max. Open Circuit Voltage	Max. Short Circuit Current	Overload Protection
40Ω	0.01Ω	1%+30	12.8V	280mA*	220Vrms

\* Minimum Value: 200mA

Range	Resolution	Beeper Active	Max. Open Circuit Voltage	Overload Protection
Beeper	0.01Ω	Resistance<4Ω	12.8V	220Vrms

### AC Voltage (40Hz~500Hz)

Range	Resolution	Accuracy (above 1V)	Input Impedance	Overload Protection
600V	0.1V	1.5%+3	4.5MΩ	750Vrms

### Meg OHMS (Auto Range)

Range	Resolution	Accuracy	Terminal Voltage
4MΩ 40MΩ 400MΩ 4000MΩ 250V	10K	3%+5 LSD (<2000M)	250V +20%~-0%
4MΩ 40MΩ 400MΩ 4000MΩ 500V			500V +20%~-0%
4MΩ 40MΩ 400MΩ 4000MΩ 1000V			1000V +10%~-0%

Range	Test Current	Short Circuit Current
4000MΩ 250V	1mA	≤1.5mA
4000MΩ 500V		
4000MΩ 1000V		

## ADDITIONAL INFORMATION

### LIFETIME WARRANTY PROGRAM

Our equipment is guaranteed against defective material and workmanship (excluding batteries and test leads) for a period of one year. For a lifetime warranty: (1) Simply register the unit upon receipt by completing and returning the product's Warranty Registration Card. (2) Once a year, send the unit to any Altek authorized distribution center for factory re-certification. Claims under warranty can be made by returning the equipment prepaid to any authorized Altek distributor. Altek will repair, recalibrate or replace free of charge any unit found to be defective or out of calibration at any time between re-certification intervals. The liability of Altek is restricted to that given under our guarantee. No responsibility is accepted for damage, loss or other expense incurred through sale or use of our equipment. Under no condition shall Altek be held liable for any special, incidental or consequential damage.

### OTHER PRODUCTS

Altek designs and manufactures fast, accurate instruments for measurement, generation and simulation of virtually every process control signal. Consult our factory directly or contact your local stocking representative to order precise, low cost Milliamp Calibrators, Voltage Sources, Thermocouple Sources, RTD Simulators, Frequency Calibrators and Pressure Pumps, Indicators & Calibrators, as well as electrical test instruments. Altek also produces calibrators for custom ranges and unique applications. New models are frequently added to the Altek family to meet all of your critical calibration requirements.

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### ORDERING INFORMATION

**Part No.**

#### **Autoranging Insulation Tester**

**530**

Included with each Model 530 are:

- Instruction Manual 100912-900
- Altek 530 Windows Software (Diskette)
- Serial Cable (Optical to Female DB-9)
- 8 x 1.5V Size AA Batteries
- Certificate of Conformity and Lifetime Warranty

**AVAILABLE FROM**