

MODEL 587

DIGITAL MULTIMETER

- **EXTRA LARGE LCD (1.3 x 2.6 Inches)**
1" Digits
- **TRUE RMS**
- **0.05% BASIC DC ACCURACY**
- **EXCEPTIONAL FUNCTIONALITY**
 - DC and AC voltage
 - DC and AC current
 - Resistance
 - Capacitance
 - Frequency
 - Continuity check
 - Diode test
 - Data hold
 - Auto power-off
- **DESIGNED FOR SAFETY TO IEC 1010**
- **RUGGED AND RELIABLE**



GENERAL DESCRIPTION

The Altek Model 587 is an industrial grade 4½ digit (20,000 count) highly accurate and reliable hand-held multimeter. Its combination of durability and features makes this multimeter a versatile solution for all industrial and commercial applications.

The Model 587 uses low power CMOS technology with a LSI circuit incorporating a double integrating A/D converter for accuracy and reliability. The Model 587 measures DC voltage and current, true RMS AC voltage and current, resistance, capacitance, frequency, and diode forward voltage. The meter also has a beeper for continuity checking. The basic DC accuracy of this meter is ±0.05% of reading, equaling or exceeding that of many higher-priced DMMs. In addition, the 4½ digit, 20,000-count display features large 1", high contrast digits for easy reading from a distance. This high-performance meter also makes true RMS AC measurements on non-sinusoidal signals.

ADDITIONAL INFORMATION

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. 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.

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 re-certification. Claims under warranty can be made by returning the equipment prepaid to any authorized Altek distributor. Altek will repair, re-calibrate 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.

SPECIFICATIONS

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

General

BATTERY: 9V, (1604) battery

LOW BATTERY INDICATION: Indication on the display when to replace the battery

OPERATING TEMPERATURE RANGE: 32°F to 104°F (0°C to 40°C)

STORAGE TEMPERATURE RANGE: 14°F to 122°F (-10°C to 50°C)

OPERATING ALTITUDE RANGE: Up to 6,500 feet

STORAGE ALTITUDE RANGE: Up to 32,800 feet

RELATIVE HUMIDITY: Maximum of 80% up to 87.8°F (31°C) decreasing linearly to 50% at 104°F (40°C)

FUSES: 0.3A/250V, (5x20mm), 10A/250V, (6x25mm)

OVERALL SIZE: 7.48 x 3.47 x 1.34 inches

(190 x 88 x 34 mm)

WEIGHT: 9.5 oz (270 g) (excluding test leads)

DC Voltage					
Range	Resolution	Accuracy	Input Impedance	Max Input	
200mV	10uV	0.05% + 3	10MΩ	230 VDC or AC RMS	
2V	100uV	0.05% + 3	10MΩ		
20V	1mV	0.05% + 3	10MΩ	1000 VDC	
200V	10mV	0.05% + 3	10MΩ	or 750 Vrms	
1000V	100mV	0.1% + 5	10MΩ		

AC Voltage (40Hz–400Hz)					
Range	Resolution	Accuracy	Input Impedance	Max Input	
200mV	10uV	0.8% + 20	10MΩ	230 VDC or AC RMS	
2V	100uV	0.8% + 20	10MΩ		
20V	1mV	0.8% + 20	10MΩ	1000 VDC	
200V	10mV	0.8% + 20	10MΩ	or 750 Vrms	
750V	100mV	1.0% + 50	10MΩ		

AC Voltage is displayed as true RMS.

DC Current					
Range	Resolution	Accuracy	Burden Voltage	Max Input	
20mA	1uA	0.5% + 2	< 0.2V	0.2A, 300mA/ 250V fused	
200mA	10uA	0.8% + 5		10A Range: 10A/ 250V fused	
10A	1mA	2.0% + 10			

Maximum current for the 10A range is 10A for 10 seconds at 15 minute intervals.

AC Current (40Hz–400Hz)					
Range	Resolution	Accuracy	Burden Voltage	Max Input	
20mA	1uA	1.0% + 20	< 0.2V	0.2A, 300mA/ 250V fused	
200mA	10uA	1.0% + 20		10A Range: 10A/ 250V fused	
10A	1mA	2.0% + 20			

Maximum current for the 10A range is 10A for 10 seconds at 15 minute intervals.
AC Current is displayed as true RMS for crest factors less than 5.

Resistance					
Range	Resolution	Accuracy	Open Circuit Voltage	Input Protection	
200Ω	0.01Ω	0.1% + 5	< 3V	230 VDC or AC RMS	
2kΩ	0.1Ω	0.1% + 2			
20kΩ	1Ω	0.1% + 2			
200kΩ	10Ω	0.1% + 2			
2MΩ	100Ω	0.1% + 2			
20MΩ	1kΩ	0.3% + 10			

Note: To obtain maximum accuracy on the 200Ω range, short the test leads to obtain the resistance of the test leads, and subtract this resistance from the measured reading.

Capacitance		
Range	Resolution	Accuracy
20nF	1pF	2.0% + 10
200nF	10pF	2.0% + 10
2uF	0.1nF	2.0% + 10
20uF	1nF	2.5% + 30

Testing Signal: 400Hz, 40mVrms

Frequency			
Range	Resolution	Accuracy	
20kHz	1Hz	1.0% + 20	
200kHz	10Hz	1.0% + 20	

Signal range: 200mV – 30Vrms, Input protection: 230Vrms

Continuity Check				
Range	Resolution	Continuity Tone	Open Ckt. V	Input Protection
2kΩ	0.1Ω	< approx. 30Ω	< 3V	230 VDC or AC RMS

Diode Test				
Range	Resolution	Test Current	Input Protection	
2V	100uV	1mA	230 VDC or AC RMS	

Displays forward voltage in Volts

Specifications subject to change without notice

OPTIONAL ACCESSORIES

Part No.

CARRYING CASE

09-3784

ORDERING INFORMATION

Part No.

AVAILABLE FROM

Industrial Grade Digital Multimeter

587

Included with each Model 587 are:

- Protective rubber boot with probe holder
- Test leads
- Carrying strap
- Data Sheet 587
- Instruction manual
- Certificate of Conformance and Lifetime Warranty