

## MODEL 7050

### 3½ Digit Digital Multimeter



#### FEATURES

- Measures volts and ohms
- 0.1% accuracy
- 1mV or 1 ohm resolution
- Dual slope integration
- Six samples per second
- Automatic polarity
- Floating input
- High input impedance
- Integrated circuit reliability
- Optional DC current measurement
- Infinite display time
- Compact
- Low cost
- Display storage

#### DESCRIPTION

The Model 7050 Digital Multimeter incorporates latest design concepts with cost savings and space advantages gained by the use of integrated circuits. The result of this combination is a low cost, accurate instrument that is ideally suitable for use in pro-

duction, general test and quality assurance, servicing and educational applications. The Model 7050 is rugged, easy to operate, read, and calibrate; and as such, is an ideal replacement for "old-fashioned" analog-type meters and panel indicators and for more expensive digital voltmeters. Its low cost and high performance capabilities make it an attractive choice for use in the O.E.M. market.

It utilizes the dual slope integrating technique which combines the noise rejection capabilities of integration with the accuracy and stability of automatic comparison to an internal standard. Fast response time is assured by its speed of six measurement samples per second.

The basic instrument provides both DC voltage and resistance capability. Optional precision shunt resistors extend its capability to DC current measurements.

Readout is easy to read, in-line indicators; three full decades plus fourth digit give full scale readout of 1500. This is equivalent to 50% over-ranging with no degradation of accuracy. Some of the standard features in the Model 7050 are input impedance of greater than 1000 megohms on its most sensitive range, floating input which may be operated 500 volts above ground, readout storage (non-blinking display), and remote controlled infinite display time.

## SPECIFICATIONS

### Functions —

DC Volts; Ohms; External Current Shunts Available

### DC VOLTS —

1.500 V Full Scale (1 mV Resolution)  
 15.00 V Full Scale  
 150.0 V Full Scale  
 1000. V Full Scale

### Input Impedance —

1.5 V Range > 1000 M $\Omega$   
 15 V to 1000 V Ranges 10 M $\Omega$

**Maximum Voltage** — 1000 V may be safely applied to any range without damage

**Voltage Coefficient:**  $\pm 0.0005\%/V$  when input exceeds 500 volts.

### RESISTANCE —

1.500 K $\Omega$  Full Scale (1  $\Omega$  Resolution)  
 15.00 K $\Omega$  Full Scale  
 150.0 K $\Omega$  Full Scale  
 1.500 M $\Omega$  Full Scale  
 15.00 M $\Omega$  Full Scale

### Input Current —

1.5 K $\Omega$  Range 1 mA  
 15 K $\Omega$  Range 100  $\mu A$   
 150 K $\Omega$  Range 10  $\mu A$   
 1.500 M $\Omega$  Range 1  $\mu A$   
 15 M $\Omega$  Range 100 nA

### ALTERNATE POWER MODELS

Line Voltage	Order
220 Volt $\pm 10\%$	Model 7050 - 220
100 Volt $\pm 10\%$	Model 7050 - 100



Model 7050 with combination Tilt Stand/Handle

**Maximum Voltage** — 125 V may be safely applied to any range without damage

### Accuracy —

From 15°C to 35°C  
 DC Volts  $\pm 0.1\%$  of reading,  $\pm 1$  digit  
 K Ohms  $\pm 0.2\%$  of reading,  $\pm 1$  digit  
 M Ohms  $\pm 1\%$  of reading,  $\pm 1$  digit  
 From 0°C to 15°C and  
 35°C to 45°C  
 DC Volts  $\pm 0.3\%$  of reading,  $\pm 2$  digits  
 K Ohms  $\pm 0.3\%$  of reading,  $\pm 2$  digits  
 M Ohms  $\pm 3.0\%$  of reading,  $\pm 2$  digits

### Readout —

Three digital readout indicators; One over-range digit; Decimal point indicators; Plus and minus polarity indicators; Display storage (non-blinking)

### Power —

115 VAC  $\pm 10\%$ ; 50-400 cps; 7 watts (See Alternate Power Models Below)

### Size and Weight —

Dimensions 3 $\frac{1}{4}$ " high x 6 $\frac{1}{4}$ " wide x  
 7 $\frac{1}{4}$ " deep  
 Weight Less than four lbs.

### Price —

Model 7050, F.O.B. Factory

1 - 4 .....	299.00
5 - 9 .....	275.00
10 - 24 .....	260.00
25 & up .....	249.00

## ACCESSORIES

**Current Shunts (Always use 1.5 V Range)**

Stock No.	Full Scale Current	Shunt Resistor	Tolerance	Price
09045091	150 $\mu A$	10 K $\Omega$	$\pm 0.1\%$	\$10
09045101	1.5 MA	1 K $\Omega$	$\pm 0.1\%$	\$10
09045111	15 MA	100 $\Omega$	$\pm 0.1\%$	\$10
09045121	150 MA	10 $\Omega$	$\pm 0.1\%$	\$10
09045131	1.5 A	1 $\Omega$	$\pm 0.3\%$	\$20

**NOTE:** Complete set of above 5 shunt resistors Price \$45

**Rack Mount** 3 $\frac{1}{2}$ " High; Will hold one or two 7050's.

Stock No. 93000256 Price \$30

**Tilt Stand/Handle;**

Stock No. 64020251 Price \$16

**Probe** with pushbutton "hold" control and "Volts" - "Ohms" select switch and two input connections.

Stock No. 93000257 Price \$22