

### TECHNICAL DATA



### Features

- True RMS measures frequency, resistance, capacitance and temperature
- Diode check and continuity functions
- Backlit LCD readout with analog bar graph
- 4-20 mA process loop measurements with % readout
- Data hold, Max/Min and Peak capture mode
- IP67 dust and waterproof
- Cat. IV 600V, Cat. III 1000V safety rating
- Includes Thermocouple Adapter, thermocouple wire probe (Type K), test leads, battery, weatherproof plugs, and carrying case

### Specifications

#### AC/DC Voltage

Range: AC: 400mV, 4, 40, 400, 1000V  
DC: 400mV, 4, 40, 400, 1000V

Accuracy: AC: 400mV  $\pm(1.0\% \text{ rdg.} + 5 \text{ dgt.})$   
4, 40, 400, 1000V  $\pm(1.0\% \text{ rdg.} + 3 \text{ dgt.})$   
DC: 400mV/4,40,  
400V  $\pm(0.06\% \text{ rdg.} + 2 \text{ dgt.})$   
1000V  $\pm(0.1\% \text{ rdg.} + 5 \text{ dgt.})$

Resolution: AC: 0.1mV, 0.001, 0.01, 1V  
DC: 0.01mV, 0.0001, 0.01, 0.1V

#### AC/DC Current

Range: 400, 4000 $\mu$ A, 40, 400mA, 10A

Accuracy: AC:  $\pm(1.5\% \text{ rdg.} + 3 \text{ dgt.})$   
DC:  $\pm(1.0\% \text{ rdg.} + 3 \text{ dgt.})$

Resolution: AC: 0.1, 1 $\mu$ A, 0.01, 0.1mA, 0.01A  
DC: 0.01, 0.1 $\mu$ A, 0.001, 0.01mA, 0.001A

#### Resistance

Range: 400 $\Omega$ , 4, 40, 400k $\Omega$ , 4, 40M $\Omega$

Accuracy: 400 $\Omega$ :  $\pm(0.3\% \text{ rdg.} + 9 \text{ dgt.})$   
4, 40, 400k $\Omega$ , 4M $\Omega$ :  $\pm(0.3\% \text{ rdg.} + 4 \text{ dgt.})$   
40M $\Omega$ :  $\pm(2.0\% \text{ rdg.} + 10 \text{ dgt.})$

Resolution: 0.01 $\Omega$ , 0.0001, 0.001,  
0.01k $\Omega$ , 0.001M $\Omega$

#### Capacitance

Range: 40, 400nF, 4, 40, 400, 4000 $\mu$ F, 40mF

Accuracy: 40, 400nF:  $\pm(3.5\% \text{ rdg.} + 40 \text{ dgt.})$   
4, 40, 400 $\mu$ F:  $\pm(3.5\% \text{ rdg.} + 10 \text{ dgt.})$   
4000 $\mu$ F, 40mF:  $\pm(5\% \text{ rdg.} + 10 \text{ dgt.})$

Resolution: 0.001, 0.01nF, 0.0001, 0.001,  
0.01, 0.1 $\mu$ F, 0.001mF

#### Frequency

Range: 40, 400Hz, 4, 40, 400kHz, 4, 40, 100MHz

Accuracy:  $\pm(0.1\% \text{ rdg.} + 1 \text{ dgt.})$

Resolution: 0.00, 0.01Hz, 0.0001, 0.001,  
0.01kHz, 0.0001, 0.001, 0.01MHz

#### Temperature

Range: -58 to 1832 $^{\circ}$ F (-50 to 1000 $^{\circ}$ C)

Accuracy:  $\pm(1.0\% \text{ rdg.} + 4.5 $^{\circ}$ F)$   
 $\pm(1.0\% \text{ rdg.} + 2.5 $^{\circ}$ C)$

Resolution: 1 $^{\circ}$ F, 1 $^{\circ}$ C

#### 4-20mA%

Range: -25 to 125%

Accuracy:  $\pm(50 \text{ dgt.})$

Resolution: 0.01%

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#### General Specifications

Range Selection:	Autoranging/Manual
True RMS:	Yes
Display:	40,000 count LCD display
Display Hold:	Yes
Max/Min:	Yes
Peak Hold:	Yes
Relative Mode:	Yes
Diode Test:	Yes
Backlit Display:	Yes
Digital Analog Bargraph:	Yes
Continuity Check:	Audible signal if resistance $\leq 35\Omega$
Duty Cycle:	Yes (0.1 - 99.9%)
Kick Stand:	Yes
Auto Power Off:	Yes (after 15 minutes)
Power Supply:	9V Battery
Low Battery Indicator:	Yes
Fuse Protection:	Yes
Replaceable Test Leads:	Yes
Overvoltage Category:	CAT. IV 600V, CAT. III 1000V
Product Certifications:	CE, IP67, Drop Tested (2M)
Operating Temperature:	41 to 104°F (5 to 40°C)

Storage Temperature:	-4 to 140°F (-20 to 60°C)
Dimensions:	7.4 x 3.2 x 2.0" (187 x 81 x 50mm)
Weight:	12oz (342g)

Model	Description
R5010	True RMS Digital Multimeter
R1020	Fused Test Lead Set
CP-09	AC Current Adapter
R2990	Thermocouple Adapter
R2920	Surface Thermocouple Probe
R2930	Right Angle Thermocouple Surface Probe
R2950	Immersion Thermocouple Probe
TP-01	Type K Thermocouple Wire Probe
R1000	Safety Test Lead Set, Double Insulated
F-500mA/1000V	Replacement Fuse
F-10A/1000V	Replacement Fuse
CA-05A	Soft Carrying Case
R5010-NIST	True RMS Digital Multimeter & NIST