

## MultiView™ Series Digital MultiMeters

### Manual Ranging Digital MultiMeters with Adjustable Viewing Angle Display

#### Features:

- Large 1" LCD display adjusts for better viewing angle
- Auto power off
- Shock resistant case with protective rubber holster
- Improper test lead position alarm alerts user if position does not match function selected
- Measurement functions include AC/DC Voltage and Current, Resistance, Diode, Continuity and Transistor
- Complete with 9V battery, test leads, protective holster and temperature probe (MV120 only)

**CE** CAT II-600V



#### Applications:

- Tilt display adjusts 0° to 80° for best viewing angle
- Industrial electrical installation and troubleshooting
- Electronic testing and repair



#### Additional Features Model MV110:

- 2000 count (3-1/2 digits)
- Basic DCV accuracy of 0.5%
- Battery check for 9V and 1.5V batteries
- 50Hz square wave output



#### Additional Features Model MV120:

- 2000 count (3-1/2 digits)
- Basic DCV accuracy of 0.5%
- Capacitance measurements
- Temperature function with switchable °C/°F units



#### Additional Features Model MV130:

- Highest resolution, 20000 count (4-1/2 digits) display
- Basic DCV accuracy of 0.05%
- Capacitance and Frequency measurements
- Data Hold and overload alarm

Specifications (Model)	Range	Max. Resolution	Basic Accuracy (%rdg+digits)
AC Voltage:	200mV, 2V, 20V, 200V, 750V	100µV 100µV	±(1.2% + 3d) MV110, MV120 ±(0.8% + 10d) MV130
DC Voltage:	200mV, 2V, 20V, 200V, 1000V	100µV 10µV	±(0.5% + 1d) MV110, MV120 ±(0.05% + 3d) MV130
AC/DC Current:			
(MV110)	20µA, 200µA, 2mA, 20mA, 200mA, 2A, 10A	10nA	±(0.8% + 1d) DC ±(1.8% + 3d) AC
(MV120)	20mA, 200mA, 20A	10µA	±(0.8% + 1d) DC ±(1.0% + 3d) AC
(MV130)	2mA, 20mA, 200mA, 10A	0.1µA	±(0.8% + 10d) DC ±(1.0% + 10d) AC
Resistance (Ω): (MV110, MV120)	200, 2k, 20k, 200k, 2M, 20M, 200M	0.1Ω	±(0.8% + 3d)
(MV130)	200, 2k, 20k, 200k, 2M, 20M	0.01Ω	±(0.2% + 1d)
Capacitance: (MV120, MV130)	2nF, 20nF, 200nF, 2µF, 20µF	1pF	±(2.5% + 3d)
Frequency: (MV130)	20kHz	1Hz	±(1.5% + 10d)
Temperature: (MV120)	-40 to 1832°F (-40 to 1000°C)	1°F/°C	±(0.75% + 3d)
Dimensions/ Weight:	3.5 x 7.5 x 1.4" (88 x 191 x 36mm) / 11oz (312g)		

#### Ordering Information:

<b>MV110</b> .....	MultiView™ Digital MultiMeter .....	<b>\$39</b>
<b>MV110-NIST</b> .....	MultiView™ Digital MultiMeter with NIST Certificate .....	<b>\$104</b>
<b>MV120</b> .....	MultiView™ Digital MultiMeter w/ Temperature .....	<b>\$69</b>
<b>MV120-NIST</b> .....	MultiView™ Digital MultiMeter w/ Temperature with NIST Certificate .....	<b>\$134</b>
<b>MV130</b> .....	MultiView™ High Resolution Digital MultiMeter .....	<b>\$99</b>
<b>MV130-NIST</b> .....	MultiView™ High Resolution Digital MultiMeter with NIST Certificate .....	<b>\$164</b>
<b>CA899</b> .....	Vinyl Pouch Carrying Case .....	<b>\$15</b>
<b>TP870</b> .....	Spare Bead Wire Temperature Probe .....	<b>\$13</b>
<b>TL805</b> .....	Spare set of CAT. III-1000V Test Leads .....	<b>\$10</b>
<b>TL807</b> .....	Set of Alligator Clips (2pk) for TL805 .....	<b>\$4</b>

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## Manual Ranging MultiMeters with Adjustable Viewing Angle Display

FUNCTION (Model)	RANGE	ACCURACY (% rdg. + digits)	RESOLUTION	INPUT PROTECTION	COMMENTS		
DC Voltage: (110, 120)	200mV	±(0.5% + 1d)	100µV	250V rms	Input impedance > 10MΩ		
	2, 20, 200V	±(0.5% + 1d)	1, 10, 100mV	1000VDC/750VAC			
	1000V	±(0.8% + 2d)	1V	1000VDC/750VAC			
	(130) 200mV	±(0.05% + 3d)	10µV	250V rms			
	2, 20, 200V	±(0.05% + 3d)	0.1, 1, 10mV	1000VDC/750VAC			
	1000V	±(0.1% + 5d)	100mV	1000VDC/750VAC			
AC Voltage: (110, 120)	200mV	±(1.2% + 3d)	100µV	1000VDC/750VAC	Input impedance > 10MΩ Frequency range: <200V: 40 to 400Hz < 750V: 40 to 200Hz		
	2, 20, 200V	±(0.8% + 3d)	1, 10, 100mV	1000VDC/750VAC			
	750V	±(1.2% + 3d)	1V	1000VDC/750VAC			
	(130) 2, 20, 200V	±(0.8% + 10d)	0.1, 1, 10mV	1000VDC/750VAC			
	750V	±(1.0% + 15d)	100mV	1000VDC/750VAC			
DC Current: (110)	20µA	±(2.0% + 5d)	10nA	2A, 250V fuse	15 sec. max @ 20A		
	200µA, 2, 20mA	±(0.8% + 1d)	0.1, 1, 10µA	2A, 250V fuse			
	200mA, 2A	±(1.2% + 1d)	100µA, 1mA	2A, 250V fuse			
	10A	±(2.0% + 5d)	10mA	not fused			
	(120) 20, 200mA	±(0.8% + 1d)	0.01, 0.1mA	0.2A, 250V fuse			
	20A	±(2.0% + 5d)	10mA	not fused			
	(130) 2, 20, 200mA	±(0.8% + 10d)	0.1, 1, 10µA	0.2A, 250V fuse			
	10A	±(2.0% + 10d)	1mA	not fused			
	AC Current: (110)	20µA	±(3.0% + 7d)	10nA		2A, 250V fuse	Frequency: 40 to 400Hz Maximum input: 10A (110, 130), 20A (120) Average responding 15 sec. max @ 20A
		200µA	±(1.8% + 3d)	0.1µA		2A, 250V fuse	
2, 20mA		±(1.0% + 3d)	1, 10µA	2A, 250V fuse			
200mA, 2A		±(1.8% + 3d)	0.1, 1mA	2A, 250V fuse			
10A		±(3.0% + 7d)	10mA	not fused			
(120) 20, 200mA		±(1.0% + 3d)	0.01, 0.1mA	0.2A, 250V fuse			
20A		±(3.0% + 7d)	10mA	not fused			
(130) 2, 20 200mA		±(1.0% + 10d)	0.1, 1, 10µA	0.2A, 250V fuse			
10A		±(2.0% + 10d)	1mA	not fused			
Resistance: (110, 120)		200Ω	±(0.8% + 3d)	0.1Ω	250V DC or ACrms	Open circuit voltage <0.7V RH 200MΩ range: <75% RH other ranges: <90% On the 200MΩ range a 1.0MΩ offset exists. Subtract 1.0MΩ from all readings.	
	2, 20, 200kΩ, 2MΩ	±(0.8% + 1d)	1, 10, 100Ω, 1kΩ				
	20MΩ	±(1.0% + 2d)	10kΩ				
	200MΩ	±(5.0%(rdg-10d)+ 10d)]	100kΩ				
	(130) 200Ω	±(0.2% + 5d)	0.01Ω				
	2, 20, 200kΩ, 2MΩ	±(0.2% + 1d)	0.1, 1, 10, 100Ω				
	20MΩ	±(0.5% + 5d)	1kΩ				
Capacitance: (120)	2, 20, 200nF	±(2.5% + 3d)	1, 10, 100pF	Test Freq: 400Hz Test V: 40mV			
	2, 20µF	±(2.5% + 3d)	1nF, 10nF				
	(130) 2, 20, 200nF	±(2.5% + 10d)	0.1, 1, 10, 100pF				
	2, 20µF	±(2.5% + 10d)	1nF				
Temperature: (120)	-18 to 400°C	±(0.75% + 4d)	1°C	Type K Thermocouple			
	0 to 752°F	±(0.75% + 4d)	1°F				
	-40 to 1000°C	±(1.6% + 15d)	1°C				
	-40 to 1832°F	±(1.6% + 15d)	1°F				
Frequency: (130)	20kHz	±(1.5% + 10d)	1Hz	250VAC/VDC	Sensitivity: 100mV		
Diode test:	Forward DC current approx. 1mA, Reverse DC voltage approx. 3V						
Transistor hFE:	0 to 1000 Base current approx. 10µA, Vce approx 2.8V						
Continuity:	Buzzer sounds when R < 30Ω						
Battery check:(110)	1.5V	30Ω Internal resistance					
	9.0V	1.8kΩ Internal resistance					
Square Wave: (110)	Approx. 50Hz, 4 to 6V						
Display:	1999 count 3 1/2 digit, adjustable angle (110, 120)						
	19999 count 4 1/2 digit, adjustable display (130)						
Sample Rate:	Approximately 2 to 3 per second						
Input warning:	Alarm sounds with test leads in the A or 10A socket with wrong function selected						
Fuse Protection:	2A (A socket), 0.2A (mA socket), 10A or 20A range not fused						
Power Supply:	9V battery						
Range selection:	Manual						
Over-range Indication:	"1"						
Auto Off:	Unit switches off after 15 minutes of inactivity						
Low Battery Indication:	Battery symbol						
Operating Temp/ Humidity:	32°F to 104°F (0°C to 40°C) / < 75% RH						
Storage Temperature:	14°F to 122°F (-10°C to 50°C)						
Dimension:	7.3 x 3.5 x 1.3" (185 x 89 x 32mm)						
Weight:	Approx. 9.7oz (300g)						

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