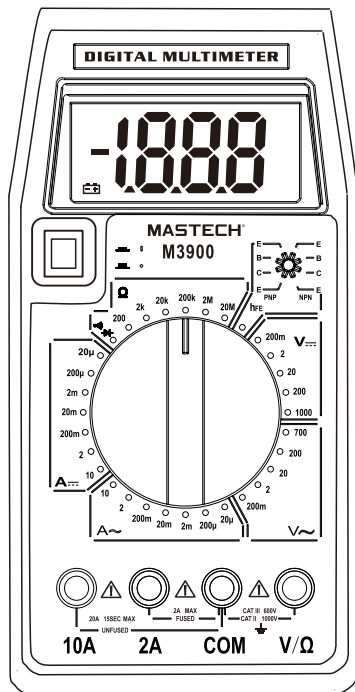


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M3900


DIGITAL MULTIMETER



4. SPECIFICATIONS

Accuracy is specified for a period one year after calibration and at 18°C to 28°C (64°F to 82°F) with relative humidity to 80% .

4.1 General

Maximum Voltage between Terminal and Earth Ground:	CAT II 1000V CAT III 600V
Fuse Protection:	A: F 2A/250V; 10A: unfused.
Power Supply:	9V battery, Neda 1604 or 6F22.
Display:	LCD, 1999 counts, updates 2-3/sec.
Measuring Method:	Dual-Slope integration A/D converter.
Overrange indication:	"1" figure only on the display.
Polarity indication:	"="displayed for negative polarity.
Operating Temperature:	0°C to 40°C (32°F to 104°F)
Storage Temperature:	-10°C to 50°C (14°F to 122°F).
Temp for guaranteed accuracy	23°C±5°C.
Low Battery Indication:	" 
Size (H x W x L)	88W×172L×36Hmm.
Weight	370g (including battery).

4.2 DC voltage

Range	Resolution	Accuracy
200mV	100μV	±(0.5% of rdg+1digits)
2V	1mV	
20V	10mV	
200V	100mV	
1000V	1V	

Input Impedance: 10MΩ on all ranges.

Overload Protection: 250Vrms AC for 200mV range, 1000V peak or 700Vrms AC for other ranges

4.3 AC voltage

Range	Resolution	Accuracy
200mV	100μV	±(1.2% of rdg+3digits)
2V	1mV	±(0.8% of rdg+3digits)
20V	10mV	
200V	100mV	
750V	1V	±(1.2% of rdg+3digits)

Input Impedance: 10MΩ on all ranges.

Frequency Range: 40Hz to 1kHz; Indication: Average (rms of sine wave).

Overload Protection: 250V rms AC for 200mV range and 1000V DC or 700Vrms AC for other ranges.

4.4 DC current

Range	Resolution	Accuracy
20μA	10nA	±(2.0% of rdg+5digits)
200μA	0.1μA	±(0.8% of rdg+1digits)
2mA	1μA	
20mA	10μA	
200mA	100μA	±(1.2% of rdg+1digits)
2A	1mA	
10A	10mA	±(2.0% of rdg+5digits)

Max Input Current: 2A:2A. 10A:10A continuous, 20A 15 sec. MAX.(4 minutes maximum ON to measure 10 minutes OFF).

Overload Protection: 2A/250V fuse (10A range unfused);
Measuring Voltage Drop:200mV

4.5 AC current

Range	Resolution	Accuracy
20μA	10nA	±(3.0% of rdg+7digits)
200μA	0.1μA	±(1.0% of rdg+3digits)
2mA	1μA	
20mA	10μA	
200mA	100μA	±(1.8% of rdg+3digits)
2A	1mA	
10A	10mA	±(3.0% of rdg+7digits)

Max Input Current: 2A:2A. 10A:10A continuous, 20A 15 sec. MAX(4 minutes maximum ON to measure 10 minutes OFF).

Overload Protection: 2A/250V fuse (10A range unfused);
Frequency Range: 40Hz to 1kHz.
Indication: Average(rms of sine wave); Measuring Voltage Drop: 200mV.

4.6 Resistance

Range	Resolution	Accuracy
200Ω	0.1Ω	±(0.5% of rdg+3digits)
2KΩ	1Ω	±(0.5% of rdg+1 digits)
20KΩ	10Ω	
200KΩ	100Ω	
2MΩ	1kΩ	±(1.0% of rdg+2digits)
20MΩ	10kΩ	

Overload Protection:250V dc/ac rms on all ranges.
Open Circuit Voltage:Less than 700mV

4.7 Diode and Audible Continuity Test

Range	Description	Test Condition
	Display read approximate forward voltage of diode	Forward DC current approximately 1mA. Reversed DC voltage approximately 2.8V.
	Built-in buzzer sounds if resistance is less than approximately 30Ω	Open Circuit Voltage approximately 2.8V.

Overload Protection: Sounds alarm(250V dc/ac rms)

4.8 Transistor hFE Test


Range	Description	Test Condition
hFE	Display read approximate hFE value (0-1000) of transistor under test (ALL TYPE)	Base Current approx 10μA VCE approximately 2.8V.

5. ACCESSORIES

Test leads	1pcs
9V NEDA 1604 or 6F22 Battery	1pcs
User's Manual	1pcs

6. MAINTENANCE

6.1 REPLACING THE BATTERY

If the sign “” appears on the LCD display, it indicates that battery should be replaced. Remove screws on the back cover and open the case. Replace the exhausted battery with a new one.

Fuse rarely need replacement and blow almost always as a result of the operator's error. Open the case and replace the blown fuse with the ratings specified: F 2A/250V (quick acting).



Warning
Before attempting to open the case, Always be sure that test leads have been disconnected from measurement circuits. Close case and tighten screws completely before using the meter to avoid electrical shock hazard.



CAUTION:
Using this appliance in an environment with a strong radiated radio-frequency electromagnetic field (approximately 3V/m), may influence its measuring accuracy. The measuring result can be strongly deviating from the actual value.

6.2 REPLACING THE PROBE

If insulation on probe is damaged, replace it.



WARNING
Use meet EN 61010-031 standard, rated CAT III 600V, 10A or better probe.

6.3 REPLACING FUSE



Warning
To avoid electric shock or personal injury, before opening back cover to replace fuse, turn off the meter and disconnect the test probe from the measurement circuit.

To replace fuse:

- ① Turn off the power to the meter.
- ② Remove all test probes from the input jacks.
- ③ Loosen screws on the back cover with screwdriver.
- ④ Remove the back cover.
- ⑤ Remove the blown fuse.
- ⑥ Replace with new fuse with the same type.
- ⑦ Put the back cover and tighten the screws.

