



## FLUKE 117

Specifications	
Maximum voltage between any terminal and earth ground	600 V
Surge protection	6 kV peak per IEC 61010-1 600 V CAT III, Pollution Degree 2
Fuse for A input	11 A, 1000 V FAST Fuse (Fluke PN 803293)
Display	Digital: 6,000 counts, updates 4 per second
Bar graph	33 segments, updates 32 per second
Operating Temperature	-10 °C to + 50 °C
Storage Temperature	-40 °C to + 60 °C
Battery type	9 volt Alkaline, NEDA 1604A/ IEC 6LR61
Battery Life	400 hours typical, without backlight
Accuracy Specifications	
DC millivolts	<b>Range:</b> 600.0 mV <b>Resolution:</b> 0.1 mV <b>Accuracy:</b> $\pm ([\% \text{ of reading}] + [\text{counts}]): 0.5\% + 2$
DC volts	<b>Range/Resolution:</b> 6.000 V / 0.001 V <b>Range/Resolution:</b> 60.00 V / 0.01 V <b>Range/Resolution:</b> 600.00 V / 0.1 V <b>Accuracy:</b> $\pm ([\% \text{ of reading}] + [\text{counts}]): 0.5\% + 2$
Auto volts	<b>Range:</b> 600.0 V <b>Resolution:</b> 0.1 V <b>Accuracy:</b> 2.0 % + 3 (dc, 45 Hz to 500 Hz) 4.0 % + 3 (500 Hz to 1 kHz)
AC millivolts <sup>1</sup> true-rms	<b>Range:</b> 600.0 mV <b>Resolution:</b> 0.1 mV

	<b>Accuracy:</b> 1.0 % + 3 (dc, 45 Hz to 500 Hz) 2.0 % + 3 (500 Hz to 1 kHz)
<b>AC volts<sup>1</sup> true-rms</b>	<b>Range/Resolution:</b> 6.000 V / 0.001 V <b>Range/Resolution:</b> 60.00 V / 0.01 V <b>Range/Resolution:</b> 600.0 V / 0.1 V <b>Accuracy:</b> 1.0 % + 3 (dc, 45 Hz to 500 Hz) 2.0 % + 3 (500 Hz to 1 kHz)
<b>Continuity</b>	<b>Range:</b> 600 $\Omega$ <b>Resolution:</b> 1 $\Omega$ <b>Accuracy:</b> Beeper on < 20 $\Omega$ , off > 250 $\Omega$ ; detects opens or shorts of 500 $\mu$ s or longer.
<b>Ohms</b>	<b>Range/Resolution:</b> 600.0 $\Omega$ / 0.1 $\Omega$ <b>Range/Resolution:</b> 6.000 k $\Omega$ / 0.001 k $\Omega$ <b>Range/Resolution:</b> 60.00 k $\Omega$ / 0.01 k $\Omega$ <b>Range/Resolution:</b> 600.0 k $\Omega$ / 0.1 k $\Omega$ <b>Range/Resolution:</b> 6.000 M $\Omega$ / 0.001 M $\Omega$ <b>Accuracy:</b> 0.9 % + 1 <b>Range/Resolution:</b> 40.00 M $\Omega$ / 0.01 M $\Omega$ <b>Accuracy:</b> 5 % + 2
<b>Diode Test</b>	<b>Range/Resolution:</b> 2.000 V / 0.001 V <b>Accuracy:</b> 0.9% + 2
<b>Capacitance</b>	<b>Range/Resolution:</b> 1000 nF / 1 nF <b>Range/Resolution:</b> 10.00 $\mu$ F / 0.01 $\mu$ F <b>Range/Resolution:</b> 100.0 $\mu$ F / 0.1 $\mu$ F <b>Range/Resolution:</b> 9999 $\mu$ F / 1 $\mu$ F <b>Range/Resolution:</b> 100 $\mu$ F to 1000 $\mu$ F <b>Accuracy:</b> 1.9% + 2 <b>Range/Resolution:</b> > 1000 $\mu$ F <b>Accuracy:</b> 5% + 20%
<b>LoZ capacitance</b>	<b>Range:</b> 1 nF to 500 $\mu$ F <b>Accuracy:</b> 10% + 2 typical
<b>AC amps true-rms (45 Hz to 500 Hz)</b>	<b>Range/Resolution:</b> 6.000 A / 0.001 A <b>Range/Resolution:</b> 10.00 A / 0.01 A <b>Accuracy:</b> 1.5% + 3 20 A continuous overload for 30 seconds max
<b>DC amps</b>	<b>Range/Resolution:</b> 6.000 A / 0.001 A <b>Range/Resolution:</b> 10.00 A / 0.01 A <b>Accuracy:</b> 1.0% + 3 20 A continuous overload for 30 seconds max
<b>Hz (V or A input)<sup>2</sup></b>	<b>Range/Resolution:</b> 99.99 Hz / 0.01 Hz <b>Range/Resolution:</b> 999.99 Hz / 0.1 Hz

	<b>Range/Resolution:</b> 9.999 Hz / 0.001 Hz <b>Range/Resolution:</b> 50.00 Hz / 0.01 Hz <b>Accuracy:</b> 0.1% + 2
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**Notes:**

- 1) All ac voltage ranges except Auto-V/LoZ are specified from 1 % to 100 % of range. Auto-V/LoZ is specified from 0.0 V.
- 2) Temperature uncertainty (accuracy) does not include the error of the thermocouple probe.
- 3) Frequency is ac coupled, 5 Hz to 50 kHz for ac voltage. Frequency is dc coupled, 45 Hz to 5 kHz for ac current.
- 4) Temperature Range/Resolution: -40 °F to 752 °F / 0.2 °F

<b>Mechanical &amp; General Specifications</b>	
<b>Size</b>	167 x 84 x 46 mm (6.57" x 3.31" x 1.82")
<b>Weight</b>	550 g