

# Fluke 117

## Electrician's Multimeter

with Non-Contact Voltage

### Technical Data



#### Compact true-rms meter for commercial applications

The Fluke 117 is the ideal meter for demanding settings like commercial buildings, hospitals and schools. The 117 includes integrated non-contact voltage detection to help get the job done faster.

#### Features include:

- **VoltAlert™ technology** for non-contact voltage detection
- **AutoVolt** automatic ac/dc voltage selection
- LoZ: helps prevent false readings due to ghost voltage
- Large white LED backlight to work in poorly lit areas
- True-rms for accurate measurements on non-linear loads
- Measures 20 A (30 seconds momentary; 10 A continuous)
- Resistance, continuity, frequency and capacitance
- Min/Max/Average to record signal fluctuations
- Compatible with optional magnetic hanger (ToolPak™) for hands free operation
- CAT III 600 V safety rated

#### General specifications

Accuracy is specified for 1 year after calibration, at operating temperatures of 18 °C to 28 °C, with relative humidity at 0 % to 95 %.

The accuracy specifications take the form of:  
 $\pm ( [ \% \text{ of reading} ] + [ \text{counts} ] )$

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/sec
Bar graph	33 segments, updates 32/sec
Operating temperature	-10 °C to + 50 °C
Storage temperature	-40 °C to + 60 °C
Battery	9 volt Alkaline, NEDA 1604A/IEC 6LR61
Battery life	400 hours typical, without backlight

Actual size



N10140



## Accuracy specifications

Measurement	Range	Resolution	Accuracy $\pm$ ([% of reading] + [counts])
DC millivolts	600.0 mV	0.1 mV	2.0 % + 3
DC volts	6.000 V	0.001 V	
	60.00 V	0.01 V	
	600.0 V	0.1 V	
Auto volts	600.0 V	0.1 V	2.0 % + 3 (dc, 45 Hz to 500 Hz) 4.0 % + 3 (500 Hz to 1 kHz)
AC millivolts <sup>1</sup> true-rms	600.0 mV	0.1 mV	1.0 % + 3 (dc, 45 Hz to 500 Hz) 2.0 % + 3 (500 Hz to 1 kHz)
AC volts <sup>1</sup> true-rms	6.000 V	0.001 V	1.0 % + 3 (45 Hz to 500 Hz) 2.0 % + 3 (500 Hz to 1 kHz)
	60.00 V	0.01 V	
	600.0 V	0.1 V	
Continuity	600 $\Omega$	1 $\Omega$	Beeper on < 20 $\Omega$ off > 250 $\Omega$ ; detects opens or shorts of 500 $\mu$ s or longer.
Ohms	600.0 $\Omega$	0.1 $\Omega$	0.9 % + 2
	6.000 k $\Omega$	0.001 k $\Omega$	0.9 % + 1
	60.00 k $\Omega$	0.01 k $\Omega$	
	600.0 k $\Omega$	0.1 k $\Omega$	
	6.000 M $\Omega$	0.001 M $\Omega$	
	40.00 M $\Omega$	0.01 M $\Omega$	1.5 % + 2
Diode test	2.000 V	0.001 V	0.9 % + 2
Capacitance	1000 nF	1 nF	1.9 % + 2
	10.00 $\mu$ F	0.01 $\mu$ F	
	100.0 $\mu$ F	0.1 $\mu$ F	
	9999 $\mu$ F	1 $\mu$ F	
	100 $\mu$ F to 1000 $\mu$ F		1.9 % + 2
	> 1000 $\mu$ F		5 % + 20
Lo-Z capacitance	1 nF to 500 $\mu$ F		10 % + 2 typical
AC amps true-rms (45 Hz to 500 Hz)	6.000 A	0.001 A	1.5 % + 3
	10.00 A	0.01 A	
	20 A continuous overload for 30 seconds max.		
DC amps	6.000 A	0.001 A	1.0 % + 3
	10.00 A	0.01 A	
	20 A continuous overload for 30 seconds max.		
Hz (V or A input) <sup>2</sup>	99.99 Hz	0.01 Hz	0.1 % + 2
	999.9 Hz	0.1 Hz	
	9.999 kHz	0.001 kHz	
	50.00 kHz	0.01 kHz	

**Notes:**

<sup>1</sup> All ac voltage ranges are specified from 1 % to 100 % of range. Because inputs below 1 % of range are not specified, it is normal for this and other true-rms meters to display non-zero readings when the test leads are disconnected from a circuit or are shorted together. For volts, crest factor of  $\leq 3$  at 4000 counts, decreasing linearly to 1.5 at full scale. AC volts is ac-coupled. Auto-V LoZ, and ac mV are dc-coupled.

<sup>2</sup> Frequency is ac coupled, 5 Hz to 50 kHz for ac voltage. Frequency is dc coupled, 45 Hz to 5 kHz for ac current.

## Ordering information

**Fluke-117** Electrician's Multimeter with Non-Contact Voltage

**Included**

TL75 Test leads, holster, User's manual and 9V battery (installed).



**Fluke.** Keeping your world up and running.