

# FLUKE®

# 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



## Accuracy specifications

Measurement	Range	Resolution	Accuracy ± ([% 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 Ω	1 Ω	Beeper on < 20 Ω off > 250 Ω; detects opens or shorts of 500 μs or longer.
Ohms	600.0 Ω	0.1 Ω	0.9 % + 2
	6.000 kΩ	0.001 kΩ	0.9 % + 1
	60.00 kΩ	0.01 kΩ	
	600.0 kΩ	0.1 kΩ	
	6.000 MΩ	0.001 MΩ	
	40.00 MΩ	0.01 MΩ	1.5 % + 2
Diode test	2.000 V	0.001 V	0.9 % + 2
Capacitance	1000 nF	1 nF	1.9 % + 2
	10.00 μF	0.01 μF	
	100.0 μF	0.1 μF	
	9999 μF	1 μF	1.9 % + 2
	100 μF to 1000 μF		
	> 1000 μF		
Lo-Z capacitance	1 nF to 500 μF		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 ≤ 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).



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# 320 Series Clamp Meters



Fluke 322

Fluke 321



### Included Accessories

C23 Soft carrying case, TL75 test leads, (2) AA alkaline batteries, coated instruction card, safety information sheet.

### Ordering Information

Fluke 321                    Clamp Meter  
 Fluke 322                    Clamp Meter  
 Fluke 112/322 Kit        Electricians Combo Kit



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## Big features, small package

The Fluke 321 and 322 are designed to verify the presence of load current, ac voltage and continuity of circuits, switches, fuses and contacts. These small and rugged clamp meters are ideally suited for current measurements up to 400 A in tight cable compartments.

Model 322 also offers DC voltage measurements and has a higher resolution for loads below 40 A.

## Features

	321	322
Compact design	●	●
Auto shut-off	●	●
Display Hold	●	●
Low battery indication	●	●
Current AC	●	●
Volts DC		●

## Specifications

Functions	321		322		321    322	
	Range	Resolution	Range	Resolution	Best Accuracy	
Current AC	400.0A	0.1A	40.00A 400.0A	0.01A 0.1A	1.8% ± 5 counts (50 - 60Hz)	1.8% ± 5 counts (50 - 60Hz)
					3.0% ± 5 counts (60Hz - 400Hz)	3.0% ± 5 counts (60Hz - 400Hz)
Voltage AC	0-400.0V 400-600V	0.1V 1V	0- 400.0V 400 - 600V	0.1V 1V	1.2% ± 5 counts (50 - 400Hz)	1.2% ± 5 counts (50 - 400Hz)
Voltage DC			0 - 400.0V 400 - 600V	0.1V 1V		1% ± 5 counts
Resistance	0 - 400.0Ω	0.1Ω	0 - 400.0Ω	0.1Ω	1% ± 5 counts	1% ± 5 counts
Continuity	≤ 30Ω		≤ 30Ω			

**Battery Life:** 100 hours typical  
 (2 AAA carbon zinc)

**Size (HxWxD):** 190 mm x 63 mm x 35 mm

**Jaw Opening:** 25 mm

**Weight:** 0.23 kg

**Two Year Warranty**

## Combo Kit

**Fluke 112/322 Kit**



## Recommended Accessories



H3



TL223



L215