

# 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 10 A (20 A overload for 30 seconds)
- 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 90 %.

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	0.5 % + 2
DC volts	6.000 V	0.001 V	0.5 % + 2
	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	0.1Ω	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		5 % + 20
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 overload for 30 seconds max.		
DC amps	6.000 A	0.001 A	1.0 % + 3
	10.00 A	0.01 A	
	20 A 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 except Auto-V/LoZ are specified from 1 % to 100 % of range. Auto-V/LoZ is specified from 0.0 V. 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 9 V battery (installed).



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

### Fluke Corporation

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Printed in U.S.A. 10/2006 2634028 D-EN-N Rev B

# 320 Series True-rms Clamp Meters

Fluke rugged. Fluke precise. Fluke reliable.

The Fluke 323, 324 and 325 Clamp Meters are designed to perform in the toughest environments and provide noise-free, reliable results users can trust to confidently diagnose problems. True-rms measurements and optimized ergonomics make the 320 Series Clamp Meters the best general troubleshooting tools for commercial and residential electricians.

**New**



## Technical Data

### Measurement capability

- 400 A ac current measurement (ac and dc current; 325 only)
- 600 V ac and dc voltage measurement
- True-rms ac voltage and current for accurate measurements on non-linear signals
- Resistance measurement to up to 40 k $\Omega$  with continuity detection
- Temperature and capacitance measurement (324 and 325 only)
- Frequency measurement (325 only)

### Features

- Slim, ergonomic design
- Large, easy to read backlight display (324 and 325 only)
- CAT IV 300 V/CAT III 600 V safety rating
- Hold button
- Two-year warranty
- Soft carrying case

## Specifications

		<b>323</b>	<b>324</b>	<b>325</b>
<b>AC current</b>	Range	400.0 A	40.00 A/400.0 A	40.00 A/400.0 A
	Accuracy	2 % ± 5 digits (45 Hz to 65 Hz) 2.5 % ± 5 digits (65 Hz to 400 Hz)	1.5 % ± 5 digits (45 Hz to 400 Hz) Note: Add 2 % for position sensitivity	2 % ± 5 digits (45 Hz to 65 Hz) 2.5 % ± 5 digits (65 Hz to 400 Hz)
<b>DC current</b>	Range	—	—	40.00 A/400.0 A
	Accuracy	—	—	2 % ± 5 digits
<b>AC voltage</b>	Range	600.0 V	600.0 V	600.0 V
	Accuracy	1.5 % ± 5 digits	1.5 % ± 5 digits	1.5 % ± 5 digits
<b>DC voltage</b>	Range	600.0 V	600.0 V	600.0 V
	Accuracy	1.0 % ± 5 digits	1.0 % ± 5 digits	1.0 % ± 5 digits
<b>Resistance</b>	Range	400.0 Ω/4000 Ω	400.0 Ω/4000 Ω	400.0 Ω/4000 Ω/40.00 kΩ
	Accuracy	1 % ± 5 digits	1 % ± 5 digits	1 % ± 5 digits
<b>Continuity</b>		≤ 70 Ω	≤ 30 Ω	≤ 30 Ω
<b>Capacitance</b>		—	100.0 μF to 1000 μF	100.0 μF to 1000 μF
<b>Frequency</b>		—	—	5.0 Hz to 500.0 Hz
<b>AC response</b>		True-rms	True-rms	True-rms
<b>Backlight</b>		—	Yes	Yes
<b>Data hold</b>		Yes	Yes	Yes
<b>Contact temperature</b>		—	-10.0 °C to 400.0 °C (14.0 °F to 752.0 °F)	-10.0 °C to 400.0 °C (14.0 °F to 752.0 °F)
<b>Min/Max</b>		—	—	Yes
<b>Size</b>	H x W x D (mm)	207 x 75 x 34	207 x 75 x 34	207 x 75 x 34
	Max wire diameter	30 mm (600 MCM)	30 mm (600 MCM)	30 mm (600 MCM)
	Weight	265 g	208 g	283 g
<b>Category rating</b>		CAT III 600 V CAT IV 300 V	CAT III 600 V CAT IV 300 V	CAT III 600 V CAT IV 300 V
<b>Warranty</b>		Two-year	Two-year	Two-year

### Ordering information

**323** True-rms Clamp Meter

**324** True-rms Clamp Meter

**325** True-rms Clamp Meter

### Included with all models

Clamp meter, test leads, soft case,  
and users manual.

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Printed in U.S.A. 5/2012 4217271A\_EN

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