

**FLUKE®**

**A family of DMMs  
designed by you,  
engineered by Fluke.**

**Fluke 117 for commercial electricians  
Fluke 116 for HVAC/R professionals**



# Fluke 117: Electricians' Multimeter with non-contact Voltage

The Fluke 117 is the meter for demanding settings like commercial buildings, hospitals and schools.

**New DMM functionality designed to make the electrician's job easier than ever before. Check out these new, innovative features.**

## **VoltAlert™ - non-contact voltage detection**

- Sense the presence of ac voltage without carrying a second tool
- Quickly determine proper grounding with visual indicator

## **Auto-V - automatic volts detection**

- Automatically determine AC/DC voltage—eliminating guesswork
- Correctly displays the voltage measurement without extra steps

## **LoZ - Low impedance input**

- Reduces chance of false readings due to ghost voltage with new low impedance design
- Safer troubleshooting in high energy 3-phase distribution panel with IEC 61010 ratings

## **Other major Fluke 117 features:**

- True-RMS for accurate measurement on non-linear loads
- 20A measurements (30 seconds momentary, 10A continuous)
- Resistance, continuity, frequency and capacitance
- Min/Max/Average to record signal fluctuations



## **Save 20 % - buy the complete Electrician's Combo Kit**

- Fluke 117 Multimeter
- Fluke 322 Clamp
- ToolPak Meter hanger
- Soft carrying case
- Test leads



**Go to [www.fluke.eu](http://www.fluke.eu) for more information.**

# Fluke 116 HVAC Multimeter with Temperature and Microamps

The Fluke 116 has the functions you need to quickly troubleshoot problems with HVAC equipment and flame sensors.



Large white LED backlight for excellent visibility in poorly lit areas

Min/Max/Average to record signal fluctuations

Compact ergonomic design for one-handed operation

CAT III 600 V safety rated

**Built-in thermometer gives you versatility** to perform a wide range of HVAC/R tests. Here are just a few examples:

### Measure superheat and subcooling.

- Measure key temperatures and pressures. Use the Fluke 116 with a Fluke velcro pipeclamp (included in kit) and the PV350 (optional) pressure module to determine superheat and subcooling values.
- Detect problems like a clogged filter drier, undercharge, overcharge, faulty metering device or improper airflow, liquid line restriction or insufficient water flow.

### Troubleshoot the defrost control on a heat pump

- Check the temperature of the air coil
- Confirm when the defrost cycle starts and ends

### Take temperature surveys

- Test out compressor heads, oil sumps, evaporator coils and suction lines, plus discharge lines, condenser coils and the liquid line

### Microamps measurement for testing flame sensors

When a furnace flame will not stay lit, use the Fluke 116 microamps measurement to troubleshoot the flame rod circuit.

### LoZ reduces chance of false readings due to ghost voltage.

(See Fluke 117 for more details about the LoZ)

# Test faster and safer with a new Fluke



Function/Feature	Benefit	Original 112	New 117	Original 16	New 116
VoltAlert – non-contact voltage indicator	Separate voltage detector not required	NO	YES	NO	NO
AutoV – determines AC/DC voltage	Correctly display voltage measurements without extra steps	NO	YES	YES	YES
LoZ – low impedance input	Reduces chance of false readings	NO	YES	YES	YES
Frequency	Measure frequency with one tool	YES	YES	NO	YES
Basic DC accuracy	Precise measurements in a handheld	0.7%	0.5%	0.9%	0.5%
Analog bar graph	Better accuracy when monitoring measurement changes	YES	YES	NO	YES
Compact ergonomic design	One-handed operation	NO	YES	NO	YES
Large white LED backlit display/larger digits	Easier to read in dark locations	NO	YES	NO	YES
Display hold/Auto (Touch) Hold	Hold measurements for later use	YES	YES	NO	YES
ToolPak/Magnetic hanger compatible	Position meter for easy viewing	YES	YES	NO	YES

## Also available:

**Fluke 115 Multimeter**  
A compact true-RMS meter for field service technicians

- Resistance, continuity, frequency, capacitance, and diode test
- Measures 20 A (30 seconds momentary; 10 A continuous)

**Fluke 114 Multimeter**  
A compact true-RMS meter for electrical troubleshooting

- AutoVolt for automatic AC/DC voltage selection
- Resistance and continuity



## Fluke Accessories

Get the most out of every Fluke tool with the right accessories.

### Electricians Accessories

**ToolPak™ Magnetic meter hanging solution.** Hang the 116 or 117 so you can work with both hands free or leave the meter in place to log data while you do other work. For more information visit [www.fluke.com/tpak](http://www.fluke.com/tpak)

### AC220 SureGrip™ Alligator Clips

Designed to improve steadiness in slippery hands. Rubber overmolded surfaces and finger-hugging curves give the user a comfortable, reliable grip. Visit [www.fluke.com/AC220](http://www.fluke.com/AC220)



**C50 Carrying Case.** Protect your meter with this rugged zippered carrying case featuring inside pocket belt loop and inside meter strap. For more information visit [www.fluke.com/accessories](http://www.fluke.com/accessories)



### HVAC Accessories

**80PK-27 SureGrip™ Industrial Surface Temperature Probe.** Type-K thermocouple for surfaces in rugged environments – measurement range: -127 to 600°C. For more information visit [www.fluke.com/80PK-27](http://www.fluke.com/80PK-27)



**80PK-3A Surface Probe.** Type-K thermocouple for flat or curved surfaces such as plates and rollers – measurement range 0 to 260°C. For more information visit [www.fluke.com/80PK-3A](http://www.fluke.com/80PK-3A)



**80PK-8 Pipe Clamp Temperature Probe.** Type-K thermocouple for fast temperature and superheat measurements of pipe surfaces – measurement range -29 to 149°C for pipe diameters from 6.4 to 34.9mm. For more information visit [www.fluke.com/80PK-8](http://www.fluke.com/80PK-8)

## Ordering Information:

- Fluke-117/322 ... Electricians Combo Kit
- Kit Fluke-117..... Electricians Multimeter
- Fluke-116/62 ..... HVAC Combo Kit
- Fluke-116 ..... HVAC Multimeter
- Fluke-115 ..... Multimeter
- Fluke-114 ..... Electrical Multimeter

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



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# 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.



**S J ELECTRONICS**  
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