

# 80 Series V Digital Multimeters

New

True RMS

EN 61010-1  
CAT III 1000V  
CAT IV 600V

Lifetime  
Warranty!  
Keep your Fluke meter  
up and running



Performance and accuracy for maximum industrial productivity

The new Fluke 80 Series V has improved measurement functions, troubleshooting features, resolution and accuracy to solve more problems on motor drives, in plant automation, power distribution, and electro-mechanical equipment. The 80 Series V operates very similar to the classic 80 Series, but with more problem-solving power, safety, convenience and impact protection.

A built-in thermometer conveniently allows you to take temperature readings without having to carry a separate instrument.

### Electrical safety

All inputs are protected to EN61010-1 (2<sup>nd</sup> edition) CAT III, 1000 V and CAT IV 600V. They can withstand impulses in excess of 8,000 V and reduce risks related to surges and spikes.

The new Fluke 87V has a unique function for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment.

## Features

	83V	87V
True-RMS voltage and current for accurate measurements on non linear signals		●
Bandwidth (voltage/current)	5 kHz	20 kHz
Digital display counts (default/selectable)	6000	20000 / 6000
Selectable filter for accurate voltage and frequency measurements on motor drives		●
Large display with analog bargraph and 2 level bright white backlight	●	●
Auto and manual ranging for maximum flexibility	●	●
Built-in thermometer lets you carry one less tool		●
Peak capture to record transients as fast as 250 μs		●
Relative mode to remove test lead resistance from low ohms measurements	●	●
Min-Max-Average recording with Min/Max Alert to capture variations automatically	●	●
Touch Hold* to capture stable readings avoiding noisy signals	●	●
Audible continuity, diode test and duty cycle	●	●
Input Alert	●	●
*"Classic" design with new removable holster with built in test lead and probe storage	●	●
Improved selectable sleep mode for long battery life		●
Easy battery and fuse exchange without opening the complete case	●	●

## Specifications (Check the Fluke Web for detailed specifications)

Functions	Maximum Range	83V		87V*	
		Max. resolution	Accuracy	Max. resolution	Accuracy
Voltage DC	1000 V	0.1 mV	±(0.1+1%)	10 μV	±(0.05%+1)
Voltage AC	1000 V	0.1 mV	±(0.5%+2)	10 μV	±(0.7%+2)
Current DC	10 A **	0.1 μA	±(0.4%+2)	0.01 μA	±(0.2%+2)
Current AC	10 A **	0.1 μA	±(1.2%+2)	0.01 μA	±(1.0%+2)
Resistance	50 MΩ	0.1 Ω	±(0.4%+1)	0.01 Ω	±(0.2%+1)
Conductance	60 nS	0.01 nS	±(1.0%+10)	0.001 nS	±(1.0%+10)
Capacitance	9999 μF	0.01 nF	±(1.0%+2)	0.01 nF	±(1.0%+2)
Frequency	> 200 kHz	0.01 Hz	±(0.005%+1)	0.01 Hz	±(0.005%+1)
Temperature	-200 to 1090 °C	-	-	0.1 °C	1.0%
80BK temperature probe	- 40 to 260 °C	-	-	-	2.2 °C or 2%

Accuracies are best accuracies for each function.

\* 87V accuracy is stated for 6,000 counts and resolution for 20,000 counts  
\*\* 20 A up to 30 seconds

**Battery Life** : Over 400 hours typical (alkaline).

**Size (without holster) (HxWxD)**: 186 mm x 86 mm x 32 mm

**Weight** : 0.36 kg

**Lifetime Warranty**



## Accessories and Ordering Information

### Included Accessories

TL75 test leads, AC72 alligator clips, holster, 80BK temperature probe (87V only), 9 V battery (installed), CD-ROM (user's manual and technical notes) and operator's guide.

### Ordering Information

Fluke 83V Multimeter

Fluke 87V True RMS Multimeter

Fluke 87V/E Industrial Electrician Combo Kit

# Fluke 87V: The ideal multimeter for measuring adjustable speed drives



The Fluke 87V DMM overcomes measurement problems caused by the adjustable speed motor drives. These drives adjust the speed of alternating current motors using pulse width modulation that generates a very 'noisy' or 'chopped' signal.

Ordinary DMMs may indicate voltage higher than the voltage actually supplied to the motor. Measurements may not agree with drive controls, and frequency measurements may be erratic. Bottom line: the technician can't tell whether a problem lies with the controls, drive or motor.

With the press of a button, the Fluke 87V DMM solves these problems. The 87V blocks unwanted high frequencies generated by inverters and provides accurate and stable measurements of motor drives: AC voltage, frequency (to calculate motor rpm) and AC current (using the current clamp accessory).

## Fluke 87V/E Industrial Electrician Combo Kit

This new combo kit is based on the Fluke 87V and includes special accessories to make industrial troubleshooting even more productive. Save over 60% compared with the individual purchase price of all the accessories.



- Fluke 87V True RMS Multimeter
- TL224 SureGrip™ Silicone Test Lead Set
- TP238 SureGrip™ Slim Reach Test Probe Set (insulated tips with 4 mm of exposed metal)
- AC220 SureGrip™ Alligator Clip Set
- Magnetic Hanger
- 80BK Temperature Probe
- C800 Hard Case

## Recommended accessories with the new Fluke 80 Series V

80i400 AC Current Clamp (400 A)



TPAK ToolPak, Meter Hanging Kit



C90 Soft Case



C800 Hard Case



L210 Probe light and probe extender



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