

# Fluke 87V Industrial Multimeter

## Diagnostic functions for maximum industrial productivity



True-rms

The Fluke 87V has measurement functions, troubleshooting features, resolution and accuracy to solve more problems on motor drives, in-plant automation, power distribution and electro-mechanical equipment.

### Features

- Unique function for accurate voltage and frequency measurements on adjustable speed motor drives and electrically noisy equipment (87V and 87V Ex).
- Large digit display with bright two level backlight makes the 87V significantly easier to read.
- Measure 20 A for up to 30 sec, 10 A continuously.
- Optional magnetic hanger for easy setup and viewing while freeing your hands for other tasks (TPAK).
- Expanded capacitance range to 10,000 µF.
- Built-in thermometer (87V).

### Electrical safety

All inputs are protected to CAT III 1000 V and CAT IV 600 V. They can withstand impulses in excess of 8,000 V to help protect you from arc blast resulting from surges and spikes.

Available in intrinsically safe version as the **Fluke 87V Ex.**



Also available as 83V average responding multimeter, see below for specifications.

### Fluke 87V Ex Intrinsically Safe True-rms Multimeter

See page 37 for more information.



### Fluke 87V/E2 Industrial Electrician's Combo Kit

Make industrial troubleshooting even more productive with accessories.

- 87V Industrial Multimeter
- C35 lightweight soft case to provide optimal protection and storage
- TL224 1.5 m silicone leads resist heat
- TP38 removable probes with 4 mm of exposed metal for use on industrial circuits
- AC220 retractable long reach alligator clips
- ToolPak™ meter hanging accessory to hold meter to steel surfaces
- 80BK-A K-type temperature probe

## Features - 87V and 83V DMMs

Features	87V Ex	87V	83V
ATEX II 2G EEx ia IIC T4 safety rating for use in Zone 1 and Zone 2	•		
True-rms ac voltage and current for accurate measurements on non linear signals	•	•	
Selectable filter for accurate voltage and frequency measurements on motor drives	•	•	
0.05 % dc accuracy	•	•	
4-1/2 digit mode for precise measurements	•	•	
Built-in thermometer lets you carry one less tool	•	•	
Large display digits and two level bright white backlight for increased visibility	•	•	•
10,000 µF capacitance range for components and motor caps	•	•	•
Peak capture to record transients as fast as 250 µs	•	•	•
Measure up to 1000 V ac and dc	•	•	•
Measure up to 10 A, 20 A for up to 30 seconds	•	•	•
Auto and manual ranging for maximum flexibility	•	•	•
Analog bargraph	•	•	•
Frequency to 200 kHz and % duty cycle	•	•	•
Min/Max and average recording to capture variations automatically	•	•	•
Relative mode to remove test lead resistance from low ohms measurements	•	•	•
Access door for fast battery changes without breaking the calibration seal	•	•	•
Limited lifetime warranty	1 year	•	•

## Specifications - 87V and 83V DMMs

Functions	Range and resolution	Basic accuracy	
		87V	83V
DC volts	600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V	0.05 %	0.1 %
AC volts	600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V	0.7 % (true-rms)	0.5 %
DC current	600.0 µA, 6000 µA, 60.00 µA, 600.0 mA, 6.000 A, 10.00 A	0.2 %	0.4 %
AC current	600.0 µA, 6000 µA, 60.00 µA, 600.0 mA, 6.000 A, 10.00 A	1.0 % (true-rms)	1.2 %
Temperature (excl. probe)	-200 °C to 1090 °C (-328 °F to 1994 °F)	1.0 %	
80BK Temperature Probe	-40 °C to 260 °C (-40 °F to 500 °F)	2.2 °C or 2 %	
Resistance	600.0 Ω, 6.000 kΩ, 60.00 kΩ, 600.0 kΩ, 6.000 MΩ, 50.00 MΩ	0.2 %	0.4 %
Capacitance	10.00 nF, 100.0 nF, 1.000 µF, 10.00 µF, 100.0 µF, 9.999 µF	1.0 %	1.0 %
Frequency	199.99 Hz, 1.9999 kHz, 19.999 kHz, 199.99 kHz	0.005 %	0.005 %

Battery life: 400 hours typical with backlight off. Size (LxWxD): 201 mm x 98 mm x 52 mm (7.9 in x 3.8 in x 2 in). Weight: 355 g (12.2 oz).

### Included accessories

TL75 Test Leads, AC72 Alligator Clips, holster, 9 V battery (installed), 80BK-A Temperature Probe (87V only) CD-ROM (users manual and technical notes) and operator's guide.

### Ordering information

- FLUKE-87-5 Industrial True-rms Multimeter with Temperature
- FLUKE-87-5/E2 Industrial Electrician's Combo Kit
- FLUKE-83-5 Industrial Multimeter
- FLUKE-87V Ex Intrinsic Safe True-rms Multimeter