

FLUKE®

87V Industrial DMM for Motor Drive Systems

Correctly measure pulse-width modulated motor drive signals

Technical Data



The new Fluke 87V is designed specifically to handle complex signals produced by adjustable speed motor drives. Think of the potential productivity you'll gain by taking the guesswork out of drive system troubleshooting. Measurements are correct each and every time.

New features for maximum productivity

- Unique function for accurate measurements of noisy pulse-width modulated ac voltage* Measures correctly at the ASD and at the motor terminals.
- Accurately measure frequency (motor speed). Frequency measurement not affected by the ASDs carrier frequency.
- Measure ac current with an optional current clamp accessory.
- Compare readings from the 87V with the display on the ASD.
- Special shielding blocks high frequency, high-energy noise generated by large drive systems.

*Patent pending

Electrical safety

All inputs are protected to Category III, 1000 V and Category IV 600 V. They can withstand impulses in excess of 8,000 V and reduce risks related to surges and spikes that can cause arc flashes.



Recommended accessories



I410



I1010

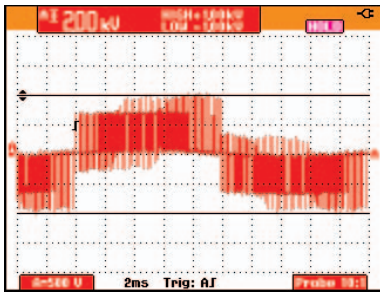


TP220

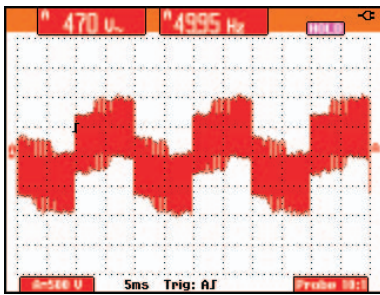


80AK





Complex PWM drive signals are not a problem for the Fluke 87V.



Pulse-width modulated detail of 50 Hz motor drive output voltage. 1000 V, 50 micro-second pulses can cause erratic behavior in some test equipment.

Features	
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	
Resistance, continuity and diode test	
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	
Improved sleep mode for long battery life	
Access door for fast battery changes without breaking the calibration seal	
Limited lifetime warranty	
Removable holster with built-in test lead and probe storage	
Cat IV 600 V and Cat III 1000 V electrical safety ratings	

Specifications

Function	Range and resolution	Basic accuracy
		87V
DC Volts	600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V	0.05 %
AC Volts	600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V	0.7 % (True-rms)
DC Current	600.0 µA, 6000 µA, 60.00 mA, 600.0 mA, 6.000 A, 10.00 A	0.2 %
AC Current	600.0 µA, 6000 µA, 60.00 mA, 600.0 mA, 6.000 A, 10.00 A	1.0 % (True-rms)
Temperature (excl. probe)	-200 to 1090 °C (-328 to 1994 °F)	1.0 %
80BK Temperature Probe	-40 to 260 °C (-40 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 %
Capacitance	10.00 nF, 100.0 nF, 1.000 µF, 10.00 µF, 100.0 µF, 9,999 µF	1.0 %
Frequency	199.99 Hz, 1.9999 kHz, 19.999 kHz, 199.99 kHz	0.005 %

Ordering information

Fluke-87-5 Industrial True-rms Multimeter with Temperature

Fluke-87-5/E Industrial Electrician Combo Kit

Included accessories

The standard 87V meter comes packaged with TL75 Test Leads, AC72 Alligator Clips, holster, 9 V battery (installed), temperature probe, CD-ROM (user's manual and technical notes) and operator's guide.

Fluke. Keeping your world up and running.

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Fluke 87V/E Industrial Electrician Combo Kit Includes:

- 1.5 m heat resistant silicone test leads.
- Removable test probes with 4 mm of exposed metal for use on industrial circuits.
- Retractable long reach alligator clips.
- Magnetic hanger to position and hold meter to steel surfaces.
- Temperature probe.
- Durable carrying case.