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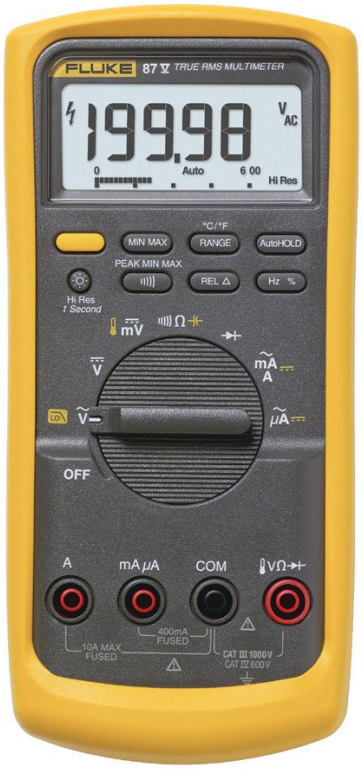
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TECHNICAL DATA

Fluke 87V Industrial Multimeter



Key features

- Identify complex signal problems fast
- Supports accurate measurements on VFDs using a low-pass filter
- Captures intermittents as fast as 250 µS with Peak Capture

Product overview: Fluke 87V Industrial Multimeter

The Fluke 87V Industrial Multimeter provides the resolution and accuracy to efficiently troubleshoot motor drives, plant automation, power distribution, and electromechanical equipment - even in loud, high-energy, and high-altitude locations. The 87V is designed so you can work more efficiently.

- Easy-access door for fast battery changes without breaking the calibration seal
- Analog bar graph for fast changing or unstable signals
- Large digit display with bright, two-level backlight for easier reading in low light
- Touch Hold keeps readings on display even after removing probes

The 87V lets you identify complex electrical problems fast. It supports accurate measurements on VFDs using a low-pass filter. The meter also captures intermittents as fast as 250 µS using Peak Capture. High-frequency, high-energy noise generated by large drive systems is blocked from your measurements with specially designed shielding.

Built to highest safety standards

All the inputs in the 87V are updated to the third edition of the EN 61010-1 to CAT III 1000 V and CAT IV 600 V. The meter is designed to withstand spikes of more than 8000 V. You also benefit from an audible Input Alert warning if the test leads are placed in the incorrect input jacks for the measurement being made.

Removable holster with built in test lead and probe storage for convenience

The 87V has a removeable holster that also holds a test probe during testing for easier viewing. Relative mode lets you remove test lead resistance, improving accuracy of low-resistance measurements. To make your life even easier, the 87V fits into an optional magnetic hanger for easy set-up and viewing while freeing your hands for other tasks.

Additional measurement features

The Fluke 87V is designed and built in the U.S. and comes with a lifetime warranty.

For a complete comparison of specifications, please visit our selection guide for digital multimeters.

					
	Fluke 87V Industrial Multimeter	Fluke 87V MAX True-rms Digital Multimeter	Fluke 289 True-RMS Data Logging Multimeter	Fluke 179 True-RMS Digital Multimeter	Fluke 1587 FC Insulation Multimeter
CAT rating	CAT III 1000 V CAT IV 600 V	CAT III 1000 V CAT IV 600 V	CAT III 1000 V CAT IV 600 V	CAT III 1000 V CAT IV 600 V	CAT III 1000 V CAT IV 600 V
True-rms readings	✓	✓	✓	✓	✓
Voltage AC/DC	1000 V	1000 V	1000 V	1000 V	1000 V
Current AC/DC	10 A	10 A	10 A	10 A	400 mA
Resistance	50 MΩ	50 MΩ	500 MΩ	50 MΩ	50 MΩ
Capacitance	9,999 µF	9,999 µF	100,000 µF	9,999 µF	9,999 µF
Temperature	-200 °C to 1090 °C	-200 °C to 1090 °C	-200 °C to 1350 °C	-40 °C to 400 °C	-40 °C to 537 °C
Additional measurement capabilities	Frequency, continuity/diode test, motor drive (VFD) measurement, duty cycle, microamps, analog bar graph, relative reference	Conductance, continuity/diode test, duty cycle, frequency, microamps, motor drive (VFD) measurement, pulse width, elative reference	Conductance (50ns), duty cycle, frequency, continuity/diode test, low input impedance, microamps, pulse width	Continuity/diode test, frequency, microamps	Frequency, Pi/DAR timed ratio tests, continuity/diode test, motor drive (VFD) measurement, microamps, relative reference
IP rating	IP 30	IP 67	IP 42	-	-
Battery life	400 hours	800 hours	200 hours	200 hours	1000 hours
Drop test	3 meters	4 meters	-	-	-
Backlit keypad	No	Yes	No	No	No

Specifications: Fluke 87V Industrial Multimeter

Specifications

Voltage DC	Maximum voltage	1000 V
	Accuracy	±(0.05% + 1)
	Maximum resolution	10 µV
Voltage AC	Maximum voltage	1000 V
	Accuracy	±(0.7% + 2) True RMS
	AC bandwidth	20 kHz with low pass filter; 3 dB @ 1 kHz
	Maximum resolution	0.1 mV
Current DC	Maximum amps	10 A (20 A for 30 seconds maximum)
	Amps accuracy	±(0.2% + 2)
	Maximum resolution	0.01 µA
Current AC	Maximum amps	10 A (20 A for 30 seconds maximum)
	Amps accuracy	±(1.0% + 2) True RMS
	Maximum resolution	0.1 µA
Resistance	Maximum resistance	50 MΩ
	Accuracy	±(0.2% + 1)
	Maximum resolution	0.1 Ω
Capacitance	Maximum capacitance	9,999 µF
	accuracy	±(1% + 2)
	Maximum resolution	0.01 nF
Frequency	Maximum frequency	200 kHz
	Accuracy	±(0.005% + 1)
	Maximum resolution	0.01 Hz
Duty cycle	Maximum duty cycle	99.9%
	Accuracy	±(0.2% per kHz + 0.1%)
	Maximum resolution	0.1%
Temperature measurement	−200.0 °C – 1090 °C −328.0 °F – 1994.0 °F excluding probe	
80 BK temperature probe	−40.0 °C – 260 °C −40.0 °F – 500 °F, 2.2 °C or 2% whichever is greater	
Conductance	Maximum conductance	60.00 nS
	Accuracy	±(1.0% + 10)
	Maximum resolution	0.01 nS
Diode	Range	3 V
	Resolution	1 mV
	Accuracy	±(2% + 1)
Duty cycle range	Accuracy	Within ±(0.2% per kHz + 0.1%)

Environmental Specifications		
Operating temperature	–20 °C to + 55 °C	
Storage temperature	–40 °C to + 60 °C	
Humidity (without condensation)	0% – 90% (0 °C – 35 °C) 0% – 70% (35 °C – 55 °C)	
Operating Altitude	2000 m	
Safety Specifications		
Overvoltage category	EN 61010–1 to 1000 V CAT III, 600V CAT IV	
Agency approvals	CE, CSA, RCM	
Mechanical and General Specifications		
Size	201 x 98 x 52 mm (with holster)	
Weight	355 g 624 g – with holster	
Display	Digital	6000 counts updates 4/sec. 19,999 counts in high–resolution mode
	Analog	32 segments, updates 40/sec
	Frequency	19,999 counts, updates 3/sec at > 10 Hz
Warranty	Lifetime	
Battery Life	Alkaline	~400 hours typical, without backlight
Shock	1 Meter drop per IEC 61010–1:2001	
Vibration	Per MIL–PRF–28800 for a Class 2 instrument	

Ordering information



Fluke 87V

Fluke 87V Industrial Multimeter

Includes:

- TL75 Test Leads (TL175 EUR)
- AC175 Alligator Clips
- Holster
- 9V Battery (Installed)
- 80BK Temperature Probe

Fluke 87V CAL

Fluke 87V Industrial Multimeter, with a traceable certificate of calibration with data from Fluke

Includes:

- TL75 Test Leads (TL175 EUR)
- AC175 Alligator Clips
- Holster
- 9V Battery (Installed)
- 80BK Temperature Probe
- A traceable certificate of calibration with data from Fluke

Optional accessories	Description
Fluke TPAK ToolPak™ Magnetic Meter Hanger	Powerful magnetic strap for safe, hands free measurements.
Fluke TLK-225 SureGrip™ Master Accessory Set	Includes all the SureGrip™ leads and probes in a handy six-pocket, roll-up pouch, along with TL224 test leads.

Optional accessories	Description
Fluke CXT80 Extreme Case	Unbreakable, watertight, airtight, dustproof, chemical resistant and corrosion proof.
Fluke Pack30 Professional Tool Backpack	The Fluke Pack30 tool backpack gives you a comfortable hands-free experience vs. traditional tool belts that put all the weight on your lower back.

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