

TECHNICAL DATA

Fluke 83V Average Responding Industrial Multimeter





Key features

New features for maximum productivity

- Optional magnetic hanger for easy set-up and viewing while freeing your hands for other tasks
- · Large digit display with bright, two-level backlight makes the 83V significantly easier to read than older models
- 6000 counts, 3-3/4 digits
- Measure up to 1000 V AC and DC
- Measure up to 10 A, 20 A for up to 30 seconds
- Frequency to 200 kHz and % duty cycle
- Resistance, continuity and diode test
- 10,000 µF capacitance range for components and motor caps
- Min/Max-Average recording with Min/Max Alert to capture variations automatically
- Relative mode to remove test lead interference from low ohms measurements
- Auto and manual ranging for maximum flexibility
- Touch Hold to capture stable readings avoiding noisy signals
- Large display digits and two-level bright white backlight for increased visibility
- Analog bargraph for fast changing or unstable signals
- Input Alert provides audible warning against wrong use of input jacks
- Improved selectable sleep mode for long battery life
- · Access door for fast battery changes without breaking the calibration seal
- "Classic" design with new removable holster with built in test lead and probe storage



· Lifetime warranty

Electrical safety

All inputs are updated to the 3rd edition of ANSI/ISA S82.01 and EN61010-1 CAT IV 600 V and CAT III, 1000 V. They can withstand impulses in excess of 8.000 V and reduce risks related to surges and spikes.

• Measure AC current with an optional current clamp accessory

Product overview: Fluke 83V Average Responding Industrial Multimeter

The Best Techs Use the Best Tools

Industrial electricians around the world trust the Fluke 83V Industrial Multimeter from the control room to the plant floor. With its accuracy and troubleshooting capabilities, the Fluke 83V Industrial Multimeter works when you need it, even in loud, high energy, and high altitude locations.

Identify Complex Signal Problems Fast

When productivity is on the line and you need to solve problems fast, the Fluke 83V delivers the accuracy and advanced troubleshooting capabilities you need.

Min/Max allows capture of signal changes

- 6000 count display resolution
- CAT III 1000 V, CAT IV 600 V safety rated
- Designed and built in the U.S.A.
- The most trusted industrial multimeter in the business
- Lifetime warranty

The Fluke 83V - Just One of Fluke's Trusted Tools

Fluke builds the most trusted tools in the world and that means more than just the Fluke 83V. If you work with HVAC equipment, need a small meter for small spaces or work in the electrical installer's and repairman's world, check out the full family of Fluke digital multimeters.

Specifications: Fluke 83V Average Responding Industrial Multimeter

Specifications				
Voltage DC	Maximum voltage	1000 V		
	Accuracy	±(0.1% + 1)		
	Maximum resolution	100 μV		
Voltage AC	Maximum voltage	1000 V		
	Accuracy	±(0.5% + 2)		
	Maximum resolution	0.1 mV		



Maximum resolution 0.01 mA					
Maximum resolution 0.01 mA Current AC Maximum amps 10 A (20 A for 30 seconds maximum) Amps accuracy ±(1.2% + 2) Maximum resolution 0.1 μA Resistance 50 MΩ Resistance 4c0uracy ±(0.4% + 1) Maximum resolution 0.1 Ω Maximum capacitance 9.999 μF Capacitance 4ccuracy ±(1% + 2) Maximum resolution 0.01 nF Maximum frequency 200 kHz Accuracy ±(0.005% + 1) Maximum tresolution 0.01 Hz Maximum duty cycle 99.9% Accuracy ±(0.2% per khz + 0.1%) Maximum conductance 60.00 nS Accuracy ±(1.0% + 10) Maximum conductance 60.00 nS Accuracy ±(1.0% + 10) Maximum resolution 0.01 nS Accuracy ±(1.0% + 10) Maximum resolution 0.01 nS Accuracy ±(1.0% + 10) Maximum resolution 0.01 nS Environmental Specifications	Current DC	Maximum amps	10 A (20 A for 30 seconds maximum)		
Current AC Maximum amps 10 A (20 A for 30 seconds maximum) Current AC Amps accuracy ±(1.2% + 2) Maximum resolution 0.1 μA Resistance Maximum resistance 50 MΩ Accuracy ±(0.4% + 1) Maximum capacitance 9.999 μF Capacitance Accuracy ±(1% + 2) Maximum resolution 0.01 nF Maximum frequency 200 kHz Accuracy ±(0.005% + 1) Maximum duty cycle 99.9% Accuracy ±(0.2% per khz + 0.1%) Maximum resolution 0.1% Maximum conductance 60.00 nS Conductance Accuracy ±(1.0% + 10) Maximum resolution 0.01 nS Range 3 V Diode Resolution 1 mV Accuracy ±(2% + 1) Duty cycle range Accuracy within ±(0.2% per kHz + 0.1%) Environmental Specifications To 0°C to +55°C Storage temperature -40°C to +60°C Humidity (without 0% - 70% (35°C - 55°C)		Amps accuracy	±(0.4% + 2)		
Current ΛC Amps accuracy ±(1.2% + 2) Maximum resolution 0.1 μA Resistance Maximum resistance 50 MΩ Accuracy ±(0.4% + 1) Maximum resolution 0.1 Ω Maximum capacitance 9.999 μF Capacitance Accuracy ±(1% + 2) Maximum frequency 200 kHz Frequency ±(0.065% + 1) Maximum frequency ±(0.065% + 1) Maximum duty cycle 99.9% Accuracy ±(0.2% per kHz + 0.1%) Maximum resolution 0.1% Maximum conductance 60.00 nS Accuracy ±(1.0% + 10) Maximum resolution 0.01 nS Accuracy ±(1.0% + 10) Maximum resolution 0.01 nS Policial Accuracy ±(2% + 1) Duly cycle range Accuracy ±(2% + 1) Duly cycle range Accuracy within ±(0.2% per kHz + 0.1%) Environmental Specifications Ox - 90% (0°C - 35°C) Operating temperature -20°C to +55°C <t< td=""><td>Maximum resolution</td><td>0.01 mA</td></t<>		Maximum resolution	0.01 mA		
Maximum resolution 0.1 μA	Current AC	Maximum amps	10 A (20 A for 30 seconds maximum)		
Resistance Maximum resistance 50 MD Accuracy ±(0.4% + 1) Maximum resolution 0.1 Ω Accuracy ±(1% + 2) Maximum resolution 0.01 nF Maximum frequency 200 kHz Frequency ±(0.005% + 1) Maximum frequency 99.9% Maximum duty cycle 99.9% Accuracy ±(0.2% per khz + 0.1%) Maximum resolution 0.1% Maximum conductance 60.00 nS Conductance 4ccuracy ±(1.0% + 10) Maximum resolution 0.01 nS 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) condensation) Operating altitude 2000 m Safety Specifications Overvoltage categ		Amps accuracy	±(1.2% + 2)		
Resistance Accuracy		Maximum resolution	0.1 μΑ		
Maximum resolution 0.1 Ω Accuracy ±(1% + 2) Maximum resolution 0.01 nF Accuracy ±(0.005% + 1) Maximum frequency 200 kHz Accuracy ±(0.005% + 1) Maximum resolution 0.01 Hz Maximum duty cycle 99.9% Accuracy ±(0.2% per khz + 0.1%) Maximum conductance 60.00 nS Maximum conductance 60.00 nS Maximum resolution 0.01 nS Maximum resolution 0.01 nS Range 3 V Polode Resolution 1 mV Accuracy ±(2% + 1) Duty cycle range Accuracy within ±(0.2% per kHz + 0.1%) Environmental Specifications Secondary within ±(0.2% per kHz + 0.1%) Environmental Specifications -20°C to +55°C Storage temperature −20°C to +55°C Storage temperature −20°C to +60°C Humidity (without condensation) 0% − 70% (35°C − 35°C) Operating altitude 2000 m Safety Specifications Overvoltage category E		Maximum resistance	50 ΜΩ		
Capacitance Maximum capacitance 9,999 μF Accuracy ±(1% + 2) Maximum resolution 0.01 nF Frequency ±(0.005% + 1) Maximum frequency ±(0.005% + 1) Maximum cresolution 0.01 Hz Maximum duty cycle 99.9% Accuracy ±(0.2% per khz + 0.1%) Maximum conductance 60.00 nS Accuracy ±(1.0% + 10) Maximum resolution 0.01 nS Accuracy ±(1.0% + 10) Maximum resolution 0.01 nS Baselution 1 mV Accuracy ±(2% + 1) Duty cycle range Accuracy within ±(0.2% per kHz + 0.1%) Environmental Specifications Secrety Specifications Operating temperature -20°C to +55°C Storage temperature -40°C to +60°C Humidity (without condensation) 0% - 90% (0°C - 35°C) Operating altitude 2000 m Safety Specifications Overvoltage category EN 61010-1 to 1000 V CAT III, 600V CAT IV Agency approvals EN 61010-1 to 100	Resistance	Accuracy	±(0.4% + 1)		
Capacitance Accuracy ± (1% + 2) Maximum resolution 0.01 nF Frequency 4ccuracy ± (0.005% + 1) Maximum resolution 0.01 Hz Maximum duty cycle 99.9% Accuracy ± (0.2% per khz + 0.1%) Maximum resolution 0.1% Maximum conductance 60.00 nS Accuracy ± (1.0% + 10) Maximum resolution 0.01 nS Range 3 V Resolution 1 mV Accuracy ± (2% + 1) Duty cycle range Accuracy ± (2% + 1) Duty cycle range Accuracy within ± (0.2% per kHz + 0.1%) Environmental Specifications Storage temperature -20°C to +55°C Storage temperature -40°C to +60°C Humidity (without condensation) 0% - 70% (35°C - 55°C) Operating altitude 200 m Safety Specifications Overvoltage category EN 61010-1 to 1000 V CAT III, 600V CAT IV Agency approvals CSA, TÜV		Maximum resolution	0.1 Ω		
Maximum resolution 0.01 nF		Maximum capacitance	9,999 µF		
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% Maximum conductance 60.00 nS Accuracy ±(1.0% + 10) Maximum resolution 0.01 nS Range 3 V Resolution 1 mV Accuracy ±(2% + 1) Duty cycle range Accuracy within ±(0.2% per kHz + 0.1%) Environmental Specifications Coperating temperature −20°C to +55°C Storage temperature −40°C to +60°C Humidity (without condensation) 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 CSA, TÜV	Capacitance	Accuracy	±(1% + 2)		
Accuracy		Maximum resolution	0.01 nF		
Duty cycle Maximum duty cycle 99.9% Accuracy ±(0.2% per khz + 0.1%) Maximum resolution 0.1% Maximum conductance 60.00 nS Conductance ±(1.0% + 10) Maximum resolution 0.01 nS Range 3 V Diode Resolution 1 mV Accuracy ±(2% + 1) Duty cycle range Accuracy within ±(0.2% per kHz + 0.1%) Environmental Specifications -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 CSA, TÜV	Frequency	Maximum frequency	200 kHz		
Duty cycle Maximum duty cycle 99.9% Accuracy ±(0.2% per khz + 0.1%) Maximum resolution 0.1% Conductance 60.00 nS Accuracy ±(1.0% + 10) Maximum resolution 0.01 nS Range 3 V Diode 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) condensation) Operating altitude 2000 m Safety Specifications Overvoltage category EN 61010−1 to 1000 V CAT III, 600V CAT IV Agency approvals CSA, TÜV		Accuracy	±(0.005% + 1)		
Duty cycle Accuracy ±(0.2% per khz + 0.1%) Maximum resolution 0.1% Conductance 60.00 nS Accuracy ±(1.0% + 10) Maximum resolution 0.01 nS Range 3 V Pesolution 1 mV Accuracy ±(2% + 1) Duty cycle range Accuracy within ±(0.2% per kHz + 0.1%) Environmental Specifications -20°C to +55°C Storage temperature −20°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 CSA, TÜV		Maximum resolution	0.01 Hz		
Maximum resolution 0.1% Maximum conductance 60.00 nS Conductance Accuracy ±(1.0% + 10) Maximum resolution 0.01 nS 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) Operating altitude 2000 m Safety Specifications Overvoltage category EN 61010−1 to 1000 V CAT III, 600V CAT IV Agency approvals CSA, TÜV	Duty cycle	Maximum duty cycle	99.9%		
Conductance Maximum conductance 60.00 nS Accuracy ±(1.0% + 10) Maximum resolution 0.01 nS Bange 3 V Resolution 1 mV Accuracy ±(2% + 1) Duty cycle range Accuracy within ±(0.2% per kHz + 0.1%) Environmental Specifications Storage 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 CSA, TÜV		Accuracy	±(0.2% per khz + 0.1%)		
Conductance Accuracy ±(1.0% + 10) Maximum resolution 0.01 nS Range 3 V Diode 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 CSA, TÜV		Maximum resolution	0.1%		
Maximum resolution 0.01 nS Properties of Safety Specifications 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 CSA, TÜV	Conductance	Maximum conductance	60.00 nS		
Range 3 V		Accuracy	±(1.0% + 10)		
Diode Resolution Accuracy Environmental Specifications Operating temperature -20°C to +55°C Storage temperature -40°C to +60°C Humidity (without condensation) Operating altitude 2000 m Safety Specifications Overvoltage category EN 61010-1 to 1000 V CAT III, 600V CAT IV Agency approvals Accuracy within ±(0.2% per kHz + 0.1%) within ±(0.2% per kHz + 0.1%) Environmental Specifications Overvoltage temperature -20°C to +55°C 0% - 90% (0°C - 35°C) 0% - 90% (0°C - 35°C) 0% - 70% (35°C - 55°C) Operating altitude CSA, TÜV		Maximum resolution	0.01 nS		
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 CSA, TÜV	Diode	Range	3 V		
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 CSA, TÜV		Resolution	1 mV		
Environmental Specifications Operating temperature		Accuracy	±(2% + 1)		
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 CSA, TÜV	Duty cycle range	Accuracy	within ±(0.2% per kHz + 0.1%)		
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 CSA, TÜV	Environmental Specification	ons			
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 CSA, TÜV	Operating temperature	−20°C to +55°C			
condensation) 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 CSA, TÜV	Storage temperature	-40°C to +60°C			
Safety Specifications Overvoltage category EN 61010-1 to 1000 V CAT III, 600V CAT IV Agency approvals CSA, TÜV	Humidity (without condensation)				
Overvoltage category EN 61010-1 to 1000 V CAT III, 600V CAT IV Agency approvals CSA, TÜV	Operating altitude	2000 m			
Agency approvals CSA, TÜV	Safety Specifications				
	Overvoltage category	EN 61010-1 to 1000 V CAT III, 600V CAT IV			
Mechanical and General Specifications	Agency approvals	CSA, TÜV	CSA, TÜV		
	Mechanical and General S				



Display	Digital	6000 counts updates 4/sec	
	Analog	32 segments, updates 40/sec	
	Frequency	19,999 counts, updates 3/sec at > 10 Hz	
Size	201 x 98 x 52 mm (with holster)		
Weight	355 g		
Weigh with holster and flex-stand	624 g		
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 83V

Fluke 83V Average Responding Industrial Multimeter

Includes:

- TL75 Test Leads
- AC175 Alligator Clips
- Holster
- 9V Battery (Installed)

