

**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 DC	Maximum amps	10 A (20 A for 30 seconds maximum)		
Maximum amps   10 A (20 A for 30 seconds maximum)		Amps accuracy	±(0.4% + 2)		
Current AC         Amps accuracy         ±(1.2% ± 2)           Maximum resolution         0.1 μA           Resistance         50 MΩ           Accuracy         ±(0.4% ± 1)           Maximum resolution         0.1 Ω           Maximum capacitance         9,999 μF           Capacitance         4(1% ± 2)           Maximum resolution         0.01 nF           Maximum frequency         200 kHz           Frequency         ±(0.005% ± 1)           Maximum resolution         0.01 Hz           Maximum duty cycle         99.9%           Maximum resolution         0.1%           Maximum conductance         60.00 nS           Conductance         Accuracy         ±(1.0% ± 10)           Maximum resolution         0.1 nS           Accuracy         ±(1.0% ± 10)           Maximum resolution         0.01 nS           Pange         3 V           Diode         Resolution         1 mV           Accuracy         ±(2% ± 1)           Duty cycle range         Accuracy         within ±(0.2% per kHz ± 0.1%)           Environmental Specifications         Operating atemperature         -20°C to +55°C           Storage temperature         -40°C to +60°C		Maximum resolution	0.01 mA		
Maximum resolution         0.1 μA           Maximum resistance         50 MΩ           Accuracy         ±(0.4% + 1)           Maximum resolution         0.1 Q           Maximum capacitance         9,999 μF           Accuracy         ±(1% + 2)           Maximum resolution         0.01 nF           Maximum frequency         200 kHz           Accuracy         ±(0.005% + 1)           Maximum frequency         99.9%           Accuracy         ±(0.2% per khz + 0.1%)           Maximum duty cycle         99.9%           Accuracy         ±(0.2% per khz + 0.1%)           Maximum resolution         0.1%           Accuracy         ±(1.0% + 10)           Maximum resolution         0.01 nS           Accuracy         ±(1.0% + 10)           Maximum resolution         0.01 nS           Range         3 V           Policial Resolution         1 mV           Accuracy         ±(2% + 1)           Duty cycle range         Accuracy         within ±(0.2% per kHz + 0.1%)           Environmental Specifications         Operating atmperature         −20°C to +55°C           Storage temperature         −20°C to +60°C           Humidity (without condensation) <td< td=""><td rowspan="3">Current AC</td><td>Maximum amps</td><td>10 A (20 A for 30 seconds maximum)</td></td<>	Current AC	Maximum amps	10 A (20 A for 30 seconds maximum)		
Maximum resistance		Amps accuracy	±(1.2% + 2)		
Accuracy		Maximum resolution	0.1 μΑ		
Maximum resolution         0.1 0           Maximum capacitance         9,999 µF           Accuracy         ±(1% + 2)           Maximum resolution         0.01 nF           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 resolution         0.01 nS           Range         3 V           Point of the properties o	Resistance	Maximum resistance	50 ΜΩ		
Capacitance         Maximum capacitance         9,999 µF           Accuracy         ±(1% + 2)           Maximum resolution         0.01 nF           Accuracy         ±(0.005% + 1)           Maximum frequency         ±(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           Polode         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% − 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	±(0.4% + 1)		
Capacitance         Accuracy         ±(1% + 2)           Maximum resolution         0.01 nF           Frequency         40.005% + 1)           Maximum frequency         ±(0.005% + 1)           Accuracy         ±(0.005% + 1)           Maximum resolution         0.01 Hz           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         -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           Agenc		Maximum resolution	0.1 Ω		
Maximum resolution   0.01 nF		Maximum capacitance	9,999 µF		
Maximum frequency	Capacitance	Accuracy	±(1% + 2)		
Frequency         Accuracy         ±(0.005% + 1)           Maximum resolution         0.01 Hz           Musimum 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         Storage 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		Maximum resolution	0.01 nF		
Maximum resolution   0.01 Hz	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           Passolution         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         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		Maximum resolution	0.01 Hz		
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         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 duty cycle	99.9%		
Conductance         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         -20°C to +55°C           Storage temperature         −20°C to +60°C           Humidity (without condensation)         0% − 90% (0°C − 35°C)           0perating altitude         2000 m           Safety Specifications           Overvoltage category         EN 61010−1 to 1000 V CAT III, 600V CAT IV           Agency approvals         CSA, TÜV	Duty cycle	Accuracy	±(0.2% per khz + 0.1%)		
Conductance         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         CSA, TÜV		Maximum resolution	0.1%		
Maximum resolution         0.01 nS           Range         3 V           Resolution         1 mV           Accuracy         ±(2% + 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  ±(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) 0perating 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 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	<b>Environmental Specificat</b>	tions			
Humidity (without condensation)  O% - 90% (0°C - 35°C) O% - 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 Specifications				



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)



### Fluke. Keeping your world up and running.®

Fluke Corporation

PO Box 9090, Everett, WA 98206 U.S.A.

For more information call: In the U.S.A. (800) 443-5853 In Canada (800) 36-FLUKE From other countries +1 (425) 446-5500 www.fluke.com ©2023 Fluke Corporation.

Specifications subject to change without notice.
05/2023

Modification of this document is not permitted without written permission from Fluke Corporation.