

Digital Multimeters

Safety, quality and performance: three words that sum up the benefits of our extensive range of digital multimeters. Designed to help you do your job faster, more efficiently and with greater accuracy, there is a model for every budget and application. Choose from handheld troubleshooters to ultra smart instruments packed with features, including the ability to log and graph data, as well as high-precision bench units.



DMM Selection guide

	Highest accuracy	Remote display	High-end Industrial	Industrial maintenance and field service	Electrical	HVAC/R	Field Service	Basic Electrical	Heavy duty (IPE7)	General Purpose	Auto-motive	Loop calibration	Insulation test
Basic features	289	233	87V	179	117	116	115	114	271I	77V	88V	789	1577
Counts	50000	6000	20000	6000	6000	6000	6000	6000	20000	6000	20000	4000	6000
True RMS readings	AC+DC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC
Basic DC accuracy	0.025%	0.25%	0.05%	0.09%	0.5%	0.5%	0.5%	0.5%	0.1%	0.3%	0.1%	0.1%	0.2%
Wide bandwidth	100 kHz	100 kHz	20 kHz						50 kHz				
Auto/manual ranging	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●
Measurements													
Voltage AC/DC	1000V	1000V	1000V	1000V	600V	600V	600V	600V	1000V	1000V	1000V	1000V	1000V
Current AC/DC	10A	10A	10A	10A	10A	200 μA	10A	60k	10A	10A	10A	1A	400 mA
Resistance	500 MΩ	40 MΩ	50 MΩ	50 MΩ	40 MΩ	40 MΩ	40 MΩ	40 MΩ	50 MΩ	50 MΩ	50 MΩ	40 MΩ	50 MΩ
Frequency	1 MHz	50 kHz	200 kHz	100 kHz	50 kHz	50 kHz	50 kHz		200 kHz	100 kHz	200 kHz	20 kHz	100 kHz
Capacitance	100 mF	10 mF	10 mF	10 mF	10 mF	10 mF	10 mF	10 mF	10 mF	10 mF	10 mF		10 mF
Temperature	+1350°C	+400°C	+1090°C	+400°C		+400°C			+1090°C		+1090°C		+500°C
dB	60 dB	60 dB											
Conductance	50 nS	50 nS	60 nS						60 nS		60 nS		
Duty cycle/pulse width	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●
Continuity with beeper/Diode test	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●
4-20mA loop current as % readout													
Motor drive measurement	●												●
RPM/Dwell													
VoltAlert™, Non-contact voltage detection					●								
LoZ: low input impedance	●				●			●					
VCHEK™ LoZ													
Microamps	●												
Insulation test													●
Number of insulation test ranges													5
Display													
Dual display	●												
Analog bargraph	●												
Backlight	●												
Remote display	●												
Data storage and exchange													
Min-Max recording/with time stamp	●/●	●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●
Fast Min-Max	250 μs	250 μs	250 μs						250 μs		250 μs		
Display Hold/Auto (Touch) Hold	●/●	●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●
Relative	●												
Stand alone logging/TrendCapture	●/●												
USB interface/RS232 interface	●/●												
Readings memories	10000												
Other features													
Source 4-20mA loop current/24V loop supply													
Automatic selection, AC/DC volts					●								
Real time clock	●												
Smoothing				●									●
Integrated holster	●			●									
Removable holster	●			●									
Closed case calibration	●			●									●
Separate battery/fuse access	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●
Completely sealed/watertight	●			●									●
Automatic power off	●			●									●
Low battery indication	●			●									●
Warranty and safety													
Lifetime warranty/warranty (years)	●	3	●	●	3	3	3	3	●	●	●	3	3
Input alert	●												
Dangerous voltage indication													
EN61010-1 CAT III	1000V	1000V	1000V	1000V	600V	600V	600V	600V	1000V	1000V	1000V	1000V	1000V
EN61010-1 CAT IV	600V	600V	600V	600V	600V	600V	600V	600V	600V	600V	600V	600V	600V
See catalog page	13	13	15	16	17	17	17	17	18	19	20	111	37

280 Series Digital Multimeters



Fluke 289



Fluke 287

Advanced diagnostic and logging functionality for maximizing productivity

Replacing the popular 180 Series, the Fluke 289 and Fluke 287 represent the next generation of high-performance industrial logging multimeters, including higher accuracy and greater troubleshooting convenience than ever before. With the ability to log data and review it graphically on the large display, you can solve problems faster and help minimize downtime, while working at several locations.

- Large 50,000 count 320 x 240 (1/4 VGA) dot matrix display

- Logging function with TrendCapture for easy review of logged data
- Multiple readings per display provide more information at a glance
- "I"-info button for convenient on-board help
- PC interface for easy data transfer

In addition, the Fluke 289 provides:

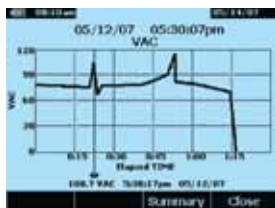
- Lo Pass filter for motor drive measurements
- LoZ – Low impedance function prevents false "ghost voltage" readings
- 50 Ω range for motor winding and low ohm measurements

Features

	287	289
True-RMS measurements	AC, AC+DC	AC, AC+DC
Bandwidth (voltage/current)	100 kHz / 100 kHz	100 kHz / 100 kHz
Digital display counts (default/selectable)	50,000 / 50,000	50,000 / 50,000
Logging function with TrendCapture	●	●
Records events and trends	●	●
Internal memory	Up to 180 h	Up to 180 h
Saves measurements	●	●
Optical USB PC communications interface	●	●
Low input impedance function (LoZ)		●
Motor winding and low ohm measurement range		50 Ω
Low pass filter		●
Field upgradeable/expandable meter	●	●
Navigation keys	●	●
F1-F4 soft keys/user function menus	●	●
I-info button/on board help screens	●	●
Multilingual interface	●	●
Saves preferred measurement setups	●	●
Current measurement: 20 A (30 seconds momentary; 10 A continuous)	●	●
Peak capture (records transients as fast as 250 μs)	●	●
Continuity measurement	●	●
Min/Max/Average with Time Stamp (records signal fluctuations)	●	●
IP Rating 54	●	●



Precise performance



View logged data graphically on screen



Specifications

(Check the Fluke web for detailed specifications)

Functions	Maximum	Max. resolution	287 and 289**
Voltage DC	1000 V	1 μV	±(0.025% + 5)
Voltage AC	1000 V	1 μV	±(0.4% + 40)
Current DC	10 A	0.01 μA	±(0.15% + 2)
Current AC	10 A	0.01 μA	±(0.7% + 5)
Temperature	-200 °C to 1350 °C	0.1 °C	±(1.0% + 1 °C)
Resistance	500 MΩ	0.01 Ω	±(0.05% + 2)
Conductance	50 nS	0.01 nS	±(1.0% + 10)
Capacitance	100 mF	0.001 nF	±(1.0% + 5)
Frequency	1 MHz	0.01 Hz	±(0.005% + 1)

Accuracies are best accuracies for each function.
** 287 and 289 accuracy and resolution are stated for 50,000 counts

Battery life: 50 hours minimum,
180 hours in logging mode
Size (HxWxD): 222 mm x 102 mm x 60 mm

Weight: 0,871 kg
Lifetime warranty

Included Accessories

TL175 test leads, AC172 alligator clips, probe holder, 6 AA batteries (installed), user manual, Calibration Certificate Sheet.

Ordering Information

- Fluke 287 True-RMS Electronic logging multimeter with TrendCapture
- Fluke 289 True-RMS Industrial logging multimeter with TrendCapture
- Fluke 289/FVF Industrial logging multimeter and Software Combo Kit (see page 5)
- Fluke 287/FVF FlukeView Forms Combo Kit (see page 5)
- FVF-SC2 FlukeView Forms software including IR/USB cable

Recommended Accessories



TLK289
See page 123

TL910
See page 121

TLK287
See page 121

TPAK
See page 132

C280
See page 130

233 Remote Display Multimeter



Fluke 233



On all inputs



Ultimate flexibility with removable display

The Fluke 233 remote display digital multimeter allows you to be in two places at once. The removable display solves the problems of holding both the meter and the test leads to make a measurement, making measurements in hard-to-reach places, and making measurements in machines or panels that are physically separated from a limit

switch or an isolator switch. Wireless technology allows the display to be carried up to 10 meters away from the point of measurement. The Fluke 233 is also designed to work in areas where the operator can't be close to the active measurement point, like clean rooms or hazardous areas.

Features

	233
Removable magnetic display	•
True-RMS measurement	•
Digital display counts	6000
Display backlight	•
Built in thermometer	•
Resistance, continuity and diode test	•
Min/Max and average recording	•
Auto power off maximizes battery life	•
Radio transmitter automatically turns off when the display is connected to the meter	•
Use as conventional multimeter when the display is connected	•
Safety rating	CAT IV 600 V / CAT III 1000 V
Auto and manual ranging	•
Display Hold and AutoHOLD®	•
Unsafe voltage alert warns for voltages above 30V	•
2 Low batteries indication	•
Ergonomic case with integrated holster	•
Selectable sleep mode preserves battery life	•

Specifications

Functions	Fluke 233		
	Maximum	Max. Resolution	Accuracy
Voltage DC	1000 V	0.1 mV	±(0.25% + 2)
Voltage AC	1000 V	0.1 mV	±(1.0% + 3)
Current DC	10 A	1 mA	±(1.0% + 3)
Current AC	10 A	1 mA	±(1.5% + 3)
Resistance	40 MΩ	0.1 Ω	±(0.9% + 1)
Capacitance	9999 μF	1 nF	±(1.9% + 2)
Frequency	50.00 kHz	0.01 Hz	±(0.1% + 2)
Temperature	-40 °C to +400 °C	0.1 °C	±(1% + 10)
Wireless frequency: 2.4 GHz ISM Band 10 meter range			

Accuracies are best accuracies for each function

Battery Life: AA alkaline (3 for main body, 2 for display), 400 hrs typical
Size (HxWxD): 193 x 93 x 53 mm

Weight: 0.6 kg
Three year warranty

Included Accessories

Test leads with 4mm lantern tips, AC 172 alligator clips, 80BK-A temperature probe, CD-ROM, AA batteries and user manual.

Ordering Information

Fluke 233 Remote Display Multimeter

Recommended Accessories



80AK-A
See page 128



80PK-9
See page 128



i410
See page 127



Tpak
See page 132



C35
See page 130

80 Series V Digital Multimeters

FLUKE®



Fluke 87V



Fluke 83V



Fluke 87V Ex



83V/87V



On all inputs



not 87V Ex

Included Accessories

TL175 test leads, AC172 alligator clips, yellow holster (H80M excl. TPAK), 80BK temperature probe (87V only), 9 V battery (installed), CD-ROM (user's manual and technical notes) and operator's guide.

Ordering Information

Fluke 83V Multimeter
 Fluke 87V True RMS Multimeter
 Fluke 87V Ex Intrinsically safe True RMS multimeter
 Fluke 87V/E2 Industrial Electrician Combo Kit
 See page 4

Performance and accuracy for maximum industrial productivity

The Fluke 80 Series V have improved measurement functions, troubleshooting features, resolution and accuracy to solve more problems on motor drives, in plant automation, power distribution, and electro-mechanical equipment.

The Fluke 87V has a unique function for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment. A built-in thermometer conveniently allows you to take temperature readings without having to carry a separate instrument. For 87V Ex see also page 118 and 119.

Features

	83V	87V / 87V Ex
True-RMS voltage and current for accurate measurements on non linear signals Bandwidth (voltage/current)	5 kHz	20 kHz
Digital display counts (default/selectable)	6000	20000 / 6000
Selectable filter for accurate voltage and frequency measurements on motor drives		●
Large display with analog bargraph and 2 level bright white backlight	●	●
Auto and manual ranging for maximum flexibility	●	●
Built-in thermometer lets you carry one less tool		●
Peak capture to record transients as fast as 250 μs		●
Relative mode to remove test lead resistance from low ohms measurements	●	●
Min-Max-Average recording with Min/Max Alert to capture variations automatically	●	●
AutoHOLD® to capture stable readings avoiding noisy signals	●	●
Audible continuity, diode test and duty cycle	●	●
Input Alert	●	●
"Classic" design with new removable holster with built in test lead and probe storage	●	●
Improved selectable sleep mode for long battery life	●	●
Easy battery exchange without opening the complete case	●	●
ATEX safety rating (EX) II 2 G Ex ia IIC T4		87V Ex

Specifications

(Check the Fluke web for detailed specifications)

Functions	Maximum Range	83V		87V/87V Ex*	
		Max. resolution	Accuracy	Max. resolution	Accuracy
Voltage DC	1000 V	0.1 mV	±(0.1%+1)	10 μV	±(0.05%+1)
Voltage AC	1000 V	0.1 mV	±(0.5%+2)	10 μV	±(0.7%+2)
Current DC	10 A **	0.1 μA	±(0.4%+2)	0.01 μA	±(0.2%+2)
Current AC	10 A **	0.1 μA	±(1.2%+2)	0.01 μA	±(1.0%+2)
Resistance	50 MΩ	0.1 Ω	±(0.4%+1)	0.01 Ω	±(0.2%+1)
Conductance	60 nS	0.01 nS	±(1.0%+10)	0.001 nS	±(1.0%+10)
Capacitance	9999 μF	0.01 nF	±(1.0%+2)	0.01 nF	±(1.0%+2)
Frequency	> 200 kHz	0.01 Hz	±(0.005%+1)	0.01 Hz	±(0.005%+1)
Temperature	-200 to 1090 °C	-	-	0.1 °C	1.0%
80BK temperature probe	-40 to 260 °C	-	-	-	2.2 °C or 2%

Accuracies are best accuracies for each function.
 * 87V accuracy is stated for 6000 counts and resolution for 20000 counts
 ** 20 A up to 30 seconds

Battery Life: Over 400 hours typical (alkaline).
Size (HxWxD): 200 mm x 95 mm x 48 mm

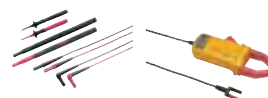
Weight: 0.6 kg
83V/87V: Lifetime Warranty
87V Ex: One Year Warranty

Recommended Accessories

(Not for hazardous zones)



C25
See page 130



TL238
See page 122



i410/i1010
See page 127



TPAK
See page 132



L215
See page 123

170 Series Digital Multimeters

Versatile meters for field service or bench repair

These meters have the features needed to find most electrical, electro-mechanical and heating and ventilation problems.

They are simple to use and have significant improvements over Fluke's original 70 Series like True-RMS, more measurement functions, conformance to the latest safety standards, and a much larger display that's easier to view.



Fluke 179



Fluke 177



Fluke 175



On all inputs



True RMS

Included Accessories

Test leads with 4 mm lantern tips, installed 9V battery and users manual. The 179 also includes the 80BK temperature probe.

Ordering Information

Fluke 175	True RMS Multimeter
Fluke 177	True RMS Multimeter
Fluke 179	True RMS Multimeter
Fluke 179/EDA2 Kit	Electronics Combo Kit
Fluke 179/MAG2 Kit	Industrial Combo Kit
	See page 4

Features

	175	177	179
True-RMS measurements	AC	AC	AC
Digital display counts, updates 4 times per second	6000	6000	6000
Display backlight		●	●
Analog bargraph / 33 segments, updates 40 times per second	●	●	●
Auto and Manual ranging	●	●	●
Display Hold and AutoHOLD®	●	●	●
Min-Max-Average recording mode with Min/Max Alert	●	●	●
Temperature readings (bead thermocouple probe included)			●
Smoothing mode allows filtering of rapidly changing inputs	●	●	●
Audible continuity and diode test	●	●	●
Test lead alert	●	●	●
Unsafe voltage alert warns for voltages above 30V	●	●	●
Low battery indication	●	●	●
Ergonomic case with integrated holster	●	●	●
Easy battery and fuse exchange without opening the complete case	●	●	●
Selectable sleep mode preserves battery life	●	●	●

Specifications

(Check the Fluke web for detailed specifications)

Functions	Maximum	Max. resolution	175	177	179
Voltage DC	1000 V	0.1 mV	±(0.15%+2)	±(0.09%+2)	±(0.09%+2)
Voltage AC	1000 V	0.1 mV	±(1.0%+3)	±(1.0%+3)	±(1.0%+3)
Current DC	10 A	0.01 mA	±(1.0%+3)	±(1.0%+3)	±(1.0%+3)
Current AC	10 A	0.01 mA	±(1.5%+3)	±(1.5%+3)	±(1.5%+3)
Resistance	50 MΩ	0.1 Ω	±(0.9%+1)	±(0.9%+1)	±(0.9%+1)
Capacitance	10000 μF	1 nF	±(1.2%+2)	±(1.2%+2)	±(1.2%+2)
Frequency	100 kHz	0.01 Hz	±(0.1%+1)	±(0.1%+1)	±(0.1%+1)
Temperature	-40 °C/+400 °C	0.1 °C			±(1.0%+10)

Accuracies are best accuracies for each function

Battery Life: Alkaline, 200 hrs typical
Size (HxWxD): 190 mm x 85 mm x 45 mm

Weight: 0.42 kg
Lifetime Warranty

Recommended Accessories



i400
See page 126



C90
See page 130



TLK-220
See page 122



SV225
See page 133



i410-i1010
See page 127

110 Series Digital Multimeters



Fluke 117



Fluke 115



Fluke 114



Fluke 116



Fluke 113



On all inputs



True RMS

Compact design for ergonomic one-handed operation

The Fluke 110 Series has five true-rms DMMs, each for specific users. The compact instruments offer convenient one-handed operation and a backlit display with large, easy-to-read digits.

Fluke 117 Electrician's Multimeter with Non-Contact Voltage

The 117 is for electricians working in commercial and non-commercial premises (like hospitals and schools). It includes extras like non-contact voltage detection for faster and safer operation.

Fluke 116 Multimeter with Temperature and Microamps

The 116 is for heating, ventilation and air conditioning (HVAC) engineers. It includes temperature measurement and microamp current ranges to quickly troubleshoot HVAC problems.

Fluke 115 Field Service Testing Multimeter

An everyday multimeter for technicians, the 115 is for electrical and electronic testing in field service, industrial, and applications where more than the basic functions simplify work.

Fluke 114 Electrical Multimeter

The 114 is for electrical troubleshooting and straightforward 'go/no-go' in residential/commercial testing. It has all the basic functions plus a special feature to prevent false readings caused by ghost voltage.

Fluke 113 Multimeter

The 113 is for basic electrical tests and repairing most electrical problems. Features include Fluke's VCHEK™, added measurement functions, backlight and conformance to the latest safety standards.

Features

	113	114	115	116	117
True RMS readings	AC	AC	AC	AC	AC
Counts	6000	6000	6000	6000	6000
Backlight	●	●	●	●	●
Analog bargraph	●	●	●	●	●
AutoVolt: Automatic AC/DC voltage selection		●		●	●
VoltAlert™, Non-contact voltage detection					●
Built-in thermometer for HVAC applications				●	
LoZ: low input impedance to prevent ghost voltage		●		●	●
VCHEK™ LoZ low impedance measurement function to simultaneously test for voltage or continuity	●				
Min/Max/Average to record signal fluctuations	●	●	●	●	●
Resistance, continuity	●	●	●	●	●
Frequency, Capacitance, Diode test	- / ● / ●		●	●	●
Microamps to test flame sensors				●	
Display hold	●	●	●	●	●
Auto/manual ranging	●	●	●	●	●
Low battery indication	●	●	●	●	●
Compact case with removable holster	●	●	●	●	●

Specifications

(Check the Fluke web for detailed specifications)

Functions	Maximum	Max. resolution	113	114	115	116	117
Voltage DC	600V	1mV	±(0.5%+2)	±(0.5%+2)	±(0.5%+2)	±(0.5%+2)	±(0.5%+2)
Voltage AC	600V	1mV		±(1.0%+3)	±(1.0%+3)	±(1.0%+3)	±(1.0%+3)
Current DC	10.00A	1mA			±(1.0%+3)		±(1.0%+3)
Current AC	10.00A	0.01A			±(1.5%+3)		±(1.5%+3)
Resistance	40MΩ (113: 60KΩ)	0.1Ω	±(0.9%+2)	±(0.9%+1)	±(0.9%+1)	±(0.9%+1)	±(0.9%+1)
Capacitance	10000µF	1nF	±(1.9%+2)		±(1.9%+2)	±(1.9%+2)	±(1.9%+2)
Frequency	50kHz	0.01Hz			±(0.1%+2)	±(0.1%+2)	±(0.1%+2)
Temperature	-40°C/+400°C	0.1°C					±(1.0%+10)
VCHEK™	600.0V AC/DC	0.1V	±(2.0%+3)				

Accuracies are best accuracies for each function

Battery type: 9 volt Alkaline, 400 hours typical **Weight:** 0.55 kg (including batteries)
Size (HxWxD): 167 mm x 84mm x 46 mm **Three Year Warranty**

Included Accessories

Test leads with 4 mm lantern tips, holster, installed 9V battery and users manual

Ordering Information

Fluke 113 True RMS Multimeter
 Fluke 114 True RMS Multimeter
 Fluke 115 True RMS Multimeter
 Fluke 116 True RMS Multimeter
 Fluke 117 True RMS Multimeter
 Fluke 117/322 Kit Electricians Combo Kit (see page 4)

Recommended Accessories



C50
See page 130



TL223-1
See page 122



MC6
See page 133



TPAK
See page 132

27II / 28II Rugged IP67 Industrial Multimeters

FLUKE®



Fluke 27 II



Fluke 28 II



On all inputs



True RMS

Designed to survive water, dust and rough handling and yet troubleshoot most electrical problems

The Fluke 27 II and 28 II digital multimeters define a new standard for operating in harsh conditions with the features and accuracy to troubleshoot most electrical problems. Both meters have IP 67 (waterproof and dustproof) rating, MSHA approvals, extended operating temperature range of -15° C to + 55° C and 95% humidity, and a 3-meter drop. They withstand hazardous 8.000 volt spikes caused by load switching and

faults on industrial circuits and complies with second edition IEC and ANSI electrical safety standards.

Furthermore, the 28 II has a unique function for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment.

The new Fluke 20 series multimeters are built to work in the toughest environments.

Features

	27 II	28 II
IP 67 waterproof & dustproof protection	●	●
Withstands 3 meter drop (with holster)	●	●
True-RMS measurements		●
Digital display counts	6000	20000/6000
Bright, two-level backlight	●	●
Backlit keypad buttons	●	●
Reversible, rubber holster	●	●
Built-in thermometer		●
Resistance, continuity and diode test	●	●
Min/Max and average recording	●	●
Improved sleep mode for long battery life	●	●
Relative mode to remove test lead resistance from low ohms measurements	●	●
Auto and manual ranging	●	●
Safety rating	CAT III 1000 V CAT IV 600 V	CAT III 1000 V CAT IV 600 V

Specifications

Functions	Maximum	Max. Resolution	27 II	28 II
Voltage DC	1000 V	0.1 mV	±(0.1% + 1)	±(0.05% + 1)
Voltage AC	1000 V	0.1 mV	±(0.5% + 3)	±(0.7% + 4)
Current DC	10 A	0.1 µA	±(0.2% + 4)	±(0.2% + 4)
Current AC	10A	0.1 µA	±(1.5% + 2)	±(1.0% + 2)
Temperature	-200°C to +1090°C	0.1°C		±(1% + 10)
Resistance	50MΩ	0.1Ω	±(0.2% + 1)	
Low pass filter (Measurement on VSD's)				yes
Capacitance	9999µF	0.01nF	±(1% + 2)	
Frequency	200 kHz	0.01 Hz	0.005% + 1	
Peak transient capture				250 µs

Accuracies are best accuracies for each function

Battery Life: 3x AA alkaline, 800 hrs typical
Size (HxWxD): 198 x 100 x 63.5 mm

Weight: 0.75 kg
Lifetime Warranty

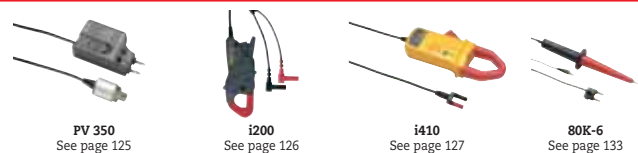
Included Accessories

TL175 Test leads, AC172 alligator clips, 80BK-A temperature probe (28 II), holster, manual, CD-ROM, three AA batteries (installed)

Ordering Information

Fluke 27 II IP 67 Industrial Multimeter
Fluke 28 II IP 67 True-RMS Industrial Multimeter

Recommended Accessories



PV 350
See page 125

i200
See page 126

i410
See page 127

80K-6
See page 133

77IV Digital Multimeter

Versatile multimeter for field service or bench repair

The 77-IV digital multimeter has the features needed to repair most electrical and electronic problems. This meter is simple to use and has significant improvements over Fluke's original 70 Series with more measurement functions, conformance to the latest safety standards, and a much larger display that's easier to view.



Fluke 77 IV



On all inputs



Features

	77 IV
Digital display counts	6000
Large display with backlight	●
Min-Max-Average recording mode with Min/Max Alert	●
High contrast digital display with large digits	●
Analog bargraph/segments	31
Auto and Manual ranging	●
Automatic Touch Hold®	●
Audible continuity / diode test	●
Ergonomic case with integrated holster	●
Sleep Mode preserves battery life	●
EN 61010-1 safety rating	CAT IV 600 V / CAT III 1000 V

Specifications

Function	Maximum	Max. resolution	Accuracy
Voltage DC	1000 V	1 mV	±(0.3%+1)
Voltage AC	1000 V	1 mV	±(2.0%+2)
Current DC	10 A	0.01 mA	±(1.5%+2)
Current AC	10 A	0.01 mA	±(2.5%+2)
Resistance	50 MΩ	0.1 Ω	±(0.5%+1)
Capacitance	9999 μF	1 nF	±(1.2%+2)
Frequency	99.99 kHz	0.01 Hz	±(0.1%+1)

Accuracies are best accuracies for each function.

Battery Life: 400 hours typical **Weight:** 0.42 kg
Size (HxWxD): 185 mm x 90 mm x 43 mm **Lifetime Warranty**

Recommended Accessories



i400
See page 126



C35
See page 130



Tpk
See page 132



TL225
See page 133



TLK-225
See page 123

Included Accessories

Test leads with 4mm lantern tips, operator's manual, 9V battery (installed)

Ordering Information

Fluke 77IV Multimeter

88V Automotive Meter



Fluke 88V/A



On all inputs



Included Accessories

H80M Holster with TPAK Meter Hanging Solution, TL224 SureGrip Silicone Test Lead Set, TP74 Test Probe Set, AC285 SureGrip Large Jaw Alligator Clip Set, 80BK Integrated Temperature Probe, RPM80 Inductive Pick-up Probe, C800 Hard Case, User's Manual + Quick Reference Guide

Ordering Information

Fluke 88V/A Automotive Meter Combo Kit

The right meter for auto-electric diagnosis

Perhaps the most important tool you'll use in troubleshooting auto electrical systems is the multimeter. Basic multimeters measure voltage, current and resistance, while automotive multimeters like the Fluke 88V have features that can check frequency, duty cycle, make diode tests, and measure temperature, pressure and vacuum.

Features

	88V/A
Continuity for detecting open and shorts	●
Frequency for "pulsed-DC" and AC tests	●
Duty cycle to verify operation of feedback carburetors	●
Diode test for alternator testing	●
Built-in thermometer; thermocouple probe included	●
Min/Max/Average recording with Min/Max Alert	●
Peak capture to record transients as fast as 250 μs	●
Relative mode to remove test lead resistance from low ohms measurements	●
Millisecond pulse width measurements for fuel injectors	●
AutoHOLD® to capture stable readings	●
Large display with bright, two-level backlight	●
Magnet hanger to attach meter to the vehicle	●
RPM80 Inductive Pickup for both conventional and distributorless (DIS) ignitions	●
Hard Meter Case	●
Safety rating	CAT III 1000 V, CAT IV 600 V

Specifications

	Fluke 88V		
	Range	Resolution	Accuracy
Voltage DC	1000V	0.1mV	0.1%
Voltage AC	1000V (5 kHz)	0.1mV	0.5%
Current DC	10A	0.1μA	0.4%
Current AC	10A	0.1μA	1.2%
Resistance	50MΩ	0.1Ω	0.4%
Capacitance	10mF	0.01nF	1%
Frequency	200kHz	0.01Hz	0.01%
Temperature	1090°C	0.1°C	1%

Battery Life: 88V – Over 400 hours typical (alkaline)

Weight: 88V – 0.36 kg
Lifetime Warranty

Size (HxWxD): 88V – 186 mm x 86 mm x 32 mm

Recommended Accessories



TL224
See page 125



TLK-282-1
See page 125



90i-610s
See page 125



80BK-27 (requires 80AK)
See page 128



PV350
See page 125

8845A/8846A 6.5 Digit Precision Multimeters

FLUKE®



Fluke 8845A



Fluke 8846A

Precision and versatility for bench or systems applications

The Fluke 8845A and 8846A, 6.5 digit precision multimeters have the precision and versatility to handle your most demanding measurements on the bench or in a system.

Dual Display offers versatile graphical capabilities: The 8845A and 8846A features a unique graphical display that can reveal signal quality issues like drift, intermittent and stability by viewing the measurement data as a real time TrendPlot™, Histogram or Statistics using the unique analyze mode.

Wide Measurement Ranges: Resistance or current has been extended to cover the widest range possible.

Perform 4-wire measurements easily with two leads: Patented split terminal jacks for 2x4 Ohms function allows you to perform precise 4-wire measurements with only two leads instead of four.

Optional Kelvin leads accessories are available to enable you to establish a 4-wire connection even in tight spaces.

Systems Capabilities: Both instruments include an RS-232, IEEE-488 and Ethernet interface as standard, with popular DMM emulation modes makes systems integration a simple task.

Software: Transfer data points from your meter to your PC with the free copy of FlukeView Forms Basic. To customize your forms upgrade with FVF-UG.



Use the built-in TrendPlot paperless chart recorder to graphically identify the extent of drift and intermittent events in analog circuits



View results in Histogram mode to reveal stability or noise problems in analog circuits



Handle even the most demanding measurements with high accuracy and 6.5 digit resolution



Included Accessories

LCI Line Power Cord, Test Lead Set, Spare Line Power fuse, Programmers Manual/ User Manual on CD-ROM, 884X-USB USB to RS232 Cable Adapter, FVF-BASIC FlukeView Forms Software Basic Version.

Ordering Information

Fluke 8845A 6.5 Digit Precision Multimeter
 Fluke 8845A/SU 6.5 Digit Precision Multimeter (software + cable)
 Fluke 8846A 6.5 Digit Precision Multimeter
 Fluke 8846A/SU 6.5 Digit Precision Multimeter (software + cable)
 Calibration & Service agreements

Features

	8845A	8846A
Display	Dual VFD Dot Matrix	
Resolution	6.5 Digits	
Measurement Rate (Rdgs/s)	1000	
Continuity / Diode Test	Yes	
Analytical Functions	Statistics, Histogram, TrendPlot™, Limit Compare	
Math Functions	NULL, Min/Max, dB/dBm	
USB Device Port	-	USB Memory Drive port
Real Time Clock	-	Yes
Interfaces	RS232, IEEE-488.2, Ethernet	
Programming Languages/Emulation Modes	SCPI (IEEE-488.2), Agilent 34401A, Fluke 45	
Safety	Designed to comply with IEC 61010-1:2000-1, ANSI / ISA-S82.01-1994, CAN / CSA-C22.2 No.1010.1-92 1000V CATI / 600V CATII	

Specifications

(Check the Fluke web for detailed specifications)

Function*	8845A			8846A		
	Range	Resolution	Accuracy* (%)	Range	Resolution	Accuracy* (%)
Voltage DC	1000 V	100 nV	0.0035	1000 V	100 nV	0.0024
Voltage AC (Freq 300 Hz)	750 V	100 nV	0.06	1000 V	100 nV	0.06
Resistance (2x4 Wire)	100 MΩ	100 μΩ	0.01	1 GΩ	10 μΩ	0.01
Current DC	10 A	100 pA	0.05	10 A	100 pA	0.05
Current AC (Freq. 3Hz-10kHz)	10 A	10 μA	0.10	10 A	100 pA	0.10
Freq/Period	300 kHz	1 μHz	0.01	1 MHz	1 μHz	0.01
Capacitance	-	-	-	1 nF to 100 mF	1 pF	1
Temperature RTD	-	-	-	-200 to +600°	0.001°	0.06

* Accuracy = +/- (% of reading)

Size (HxWxD): 88 mm x 215 mm x 293 mm

Weight: 3.6 kg

Three Year Warranty

Recommended Accessories



884X-case
Hard case



TL2X4W-TWZ
2x4 Wire Ohms Tweezer
Test Leads



TL2X4W-PT II
2x4 Wire Ohms Test
lead 2mm Probe Tip



884X-512M
USB Memory 512M



FVF-UG
FlukeView Forms
Software Upgrade

8808A 5.5 Digit Multimeter



Fluke 8808A



The Fluke 8808A includes two low impedance low current ranges for measuring sensitive leakage currents



Use setup keys (S1-S6) for fast access to repetitive measurements. Setups can include limit compare mode with pass/fail indicators



Dual Display



Included Accessories

LCI Line Power Cord, Test Lead Set, Spare Line Power fuse, 884X-USB USB to RS232 Cable Adapter, FlukeView Forms Software Basic Version, Programmers Manual/User Manual on CD-ROM.

Ordering Information

Fluke 8808A 5.5 digit multimeter
 Fluke 8808A/SU 5.5 digit multimeter, (software & cable)
 Fluke 8808A/TL 5.5 digit multimeter, 2X4W Test Lead Kit

Versatile multimeter for manufacturing, development and service applications

Manufacturing test, R&D, development and service applications demand performance and flexibility from a bench meter. The Fluke 8808A delivers a wide variety of measurement functions, including volts, ohms, and amps, plus frequency - all at superior accuracy and resolution with a basic V dc accuracy of 0.015 %.

Measure sensitive leakage current: The Fluke 8808A includes two low impedance low current ranges for measuring sensitive leakage currents (i-Leakage).

Perform routine manufacturing functional tests with consistency: Use setup keys (S1 - S6) for fast access to repetitive measurements. Operators no longer need to press multiple buttons to make routine measurements.

Eliminate production mistakes: The 8808A has a limit compare mode with built in display enunciators that clearly show whether a test is within or out of limits.

Perform 4-wire measurements with only two leads: Patented split terminal jacks for 2x4 Ohms function allow you to perform precise 4-wire low ohms measurements with only two leads instead of four. Optional test lead accessories are available to enable you to establish a 4-wire connection even in tight spaces or on surface mount devices.

Features

	8808A
Display	VFD multi segment
Resolution	5.5 digits
Measurements	V ac, V dc, I dc, I ac, Ω, Cont, Diode
Advanced Measurements	2X4 Wire Ohms, Freq, i-Leakage
Continuity / Diode Test	Yes
Analytical Functions	Limit Compare
Math Functions	dBm, dB, Min, Max
Interfaces	RS-232, USB via optional adapter
Programming Languages/Modes	Simplified ASCII, Fluke 45
Safety Rating	CAT I 1000 V, CAT II 600 V

Specifications

(Check the Fluke web for detailed specifications)

Functions	Range	Resolution	Accuracy*
Voltage DC	200 mV to 1000 V	1 μV	0.015
Voltage AC (Freq. 10 Hz to 100 kHz)	200 mV to 750 V	1 μV	0.2
Resistance (2x4 Wire)	200 Ω to 100 MΩ	1 mΩ	0.02
Current DC	200 μA to 10 A	1 nA	0.02
Current AC (Freq. 20 Hz to 2 kHz)	20 mA to 10A	0.1 μA	0.3
Freq. Period	20 Hz to 1 MHz (Freq. only)	0.1 mHz	0.01

* Accuracy = +/- (% of reading)

Size (HxWxD): 88 mm x 217 mm x 297 mm

Weight: 2.1 kg

Three year Warranty

Recommended Accessories

