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Digital Multimeters

Safety, quality and performance: three words that sum up the benefits of our extensive range of digital multimeters. From compact first-level troubleshooters to ultra smart instruments packed with features. Designed to help you do your job faster, more efficiently and with greater accuracy, there's a model for every budget and application.



	Highest accuracy		High-end Industrial		Industrial maintenance and field service		Compact general purpose			Classic design		Heavy duty		Electrical troubleshooting		Automotive troubleshooting		Graphical meter		Process Meters		
	189	187	87V	83V	179	177	175	110	111	112	77	73	27	16	12	7-600	88V	78	867B	789	787	
Basic features	1000V	1000V	1000V	1000V	1000V	1000V	1000V	600V	600V	600V	1000V	1000V	1000V	1000V	600V	600V	1000V	300V	1000V	1000V	1000V	
Counts	50000	50000	20000	6000	6000	6000	6000	6000	6000	6000	3200	3200	3200	4000	4000	4000	20000	4000	30000	30000	30000	
True RMS readings	AC+DC	AC+DC	AC	AC	AC	AC	AC	AC	AC	AC									AC+DC	AC	AC	
Basic DC accuracy	0.025%	0.025%	0.05%	0.1%	0.09%	0.09%	0.15%	0.7%	0.7%	0.7%	0.3%	0.3%	0.1%	1.5%	0.9%	1.5%	0.1%	0.3%	0.025%	0.1%	0.1%	
Wide bandwidth	100kHz	100kHz	20kHz	5kHz									30kHz						30 kHz			
Auto/manual ranging	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	
Measurements																						
Voltage AC/DC	1000V	1000V	1000V	1000V	1000V	1000V	1000V	600V	600V	600V	1000V	1000V	1000V	1000V	600V	600V	1000V	300V	1000V	1000V	1000V	
Current AC/DC	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	
Resistance	500MΩ	500MΩ	50MΩ	50MΩ	50MΩ	50MΩ	50MΩ	40MΩ	40MΩ	40MΩ	32MΩ	32MΩ	32MΩ	40MΩ	40MΩ	40MΩ	50MΩ	40MΩ	30MΩ	40MΩ	40MΩ	
Frequency	1MHz	1MHz	200kHz	200kHz	100kHz	100kHz	100kHz	50kHz	50kHz	50kHz	100kHz	100kHz	100kHz	100kHz	100kHz	100kHz	100kHz	100kHz	100kHz	100kHz	200kHz	
Capacitance	50mF	50mF	10mF	10mF	10mF	10mF	10mF	10mF	10mF	10mF				10mF	10mF	10mF	10mF	10mF	10mF	10mF	10mF	
Temperature	+1350°C	+1350°C	+1090°C											+400°C			+1090°C	+980°C				
dB	60dB	60dB																				
Conductance	500nS	500nS	60nS	60nS									32nS				60nS	300nS				
Duty cycle/pulse width	●/●	●/●	●/●	●/●													●/●	●/●	●/●	●/●	●/●	
Continuity with beeper	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Diode test	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
4-20mA loop current as % readout																						
Motor drive measurement																						
RPM / Dwell																						
Display																						
Waveform display																						
Dual display	●	●																				
Analog bargraph	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Backlight	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Data storage and exchange																						
Min-Max recording/with time stamp	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	
Fast Min-Max	250µs	250µs	250µs	250µs													250µs		1µs			
Display Hold/Auto [Touch] Hold	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Relative	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
RS-232 interface	●	●																				
Stand-alone logging	●	●																				
Readings memories	100																					
Other features																						
Source 4-20mA loop current/24V loop supply																						
Automatic selection, VCheck																						
Real time clock	●	●																				
Smoothing																						
Integrated holster	●	●																				
Removable holster	●	●																				
Closed case calibration	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Calibration certificate with data	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Separate battery/fuse access	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	
Automatic power off	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Low battery indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Warranty and safety																						
Lifetime warranty	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Warranty (years)								3	3	3												
Input alert	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Dangerous voltage indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
EN61010-1 CAT II																						
EN61010-1 CAT III	1000V	1000V	1000V	1000V	1000V	1000V	1000V	600V	600V	600V	1000V	1000V	1000V	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	600V	600V	600V	600V	600V	600V	600V	600V	
See catalog page	15	15	16	16	17	17	17	18	18	18	19	19	20	21	21	28	22	22	23	23	59	

Test faster and safer with a new Fluke meter

Move up to better performance

Move up from your old 70 Series and benefit from over 10 improvements. The new 179 has features and diagnostic functions for faster, safer and more accurate testing. See page 17 for more details.



Fluke 79



Fluke 179

	Old Series (10 years ago)	New Series	Benefit
Model numbers	75, 77, 79, 21, 23	175, 177, 179	
Warranty	Expired	Lifetime	Lower cost of ownership.
Example product	Old Fluke 79	New Fluke 179	
Do your job safer: Your no 1 priority.			
Electrical safety rating (EN 61010-1)	CAT II	CAT III 1000 V CAT IV 600 V	Maximum safety against arc blasts and transients.
Unsafe Volt Alert above 30 V	No	Yes	Warns user of potentially dangerous voltages.
Test leads	Test leads with 2 mm probe tips	Silicon test leads with 4 mm tips + protective cap	Test leads stay fixed in wall socket. Cap protects user from accidental shock.
Test leads safety rating	Not rated	CAT III 1000 V CAT IV 600 V	Safety of test leads is just as important as the meter.
Do your job faster: New features simplify day to day work.			
Min/Max/Average	No	Yes	Capture intermittent problems.
Display size	Standard	20% larger	Large, easy to read.
Display backlight	No	Yes	Usable in dim areas.
Battery door	No	Yes	Easy battery exchange without opening the complete case.
Optional magnetic hanger	No	Yes	Use ToolPak to hold meter in best position.
Do your job better: More functions, more measurement ranges, more accurate.			
True-rms	No	Yes	Accurate on non-linear signals.
Basic accuracy, dcV	0,30%	0,09%	Three times more accurate.
Max. AC voltage	750	1000	Wider measurement range.
Temperature	No	Yes	No need for a separate thermometer.

Move up from your old 8060 Series and benefit from over 15 improvements.

The new Fluke 189 has new features and functions to troubleshoot more problems with one tool, find intermittent problems and get the job done faster, easier and safer. See page 15 for more details.



Fluke 8060A



Fluke 189

	Old Series (10 years ago)	New Series	Benefit
Model numbers	8062A, 8060A	187, 189	
Warranty	Expired	Lifetime	Lower cost of ownership.
Example product	Old Fluke 8060A	New Fluke 189	
Do your job safer: Your no 1 priority.			
Electrical safety rating (EN 61010-1)	IEC348 Class II	CAT III 1000 V CAT IV 600 V	Maximum safety against arc blasts and transients.
Unsafe Volt Alert above 30 V	No	Yes	Warns user of potentially dangerous voltages.
Test leads safety rating	Not rated	CAT III 1000 V CAT IV 600 V	Safety of test leads is just as important as the meter.
Do your job faster: New features simplify day to day work.			
Built in recorder with time stamp	No	Yes	Record and view intermittent problems and drift.
Min/Max/Average	No	Yes	Capture intermittent problems.
Peak capture	No	250 µs min/max	Find glitches and transients without a scope.
PC interface	No	Isolated IR serial port	Transfer readings to FlukeView® software.
Digital display	Standard	20% larger dual display, backlight and bargraph	Easier to read under all conditions. Display two measurements at once.
Range selection	Manual	Auto and Manual	Faster, most accurate range selected.
Optional magnetic hanger	No	Yes	Use ToolPak to hold meter in best position.
Do your job better: More functions, more measurement ranges, more accurate.			
AC + DC measurement	No	Yes	Measure composite signals.
Best resolution	10 µV	1 µV	See more detail, observe trends better.
AC voltage	750 V max.	1000 V max.	Measure higher voltages.
AC and DC current	2 A max.	10 A max.	Measure 5 times more in-line current.
Temperature	No	Yes	No need for a separate thermometer.
Capacitance	No	Yes	Measure motor capacitors and components.
Duty cycle, pulse width	No	Yes	Troubleshoot control circuits.
Frequency range	200 kHz (700 kHz)	1 MHz	Measure high frequency signals.

Fluke Combo Kits

Buy a Combo Kit and save

New



87V/E Industrial Electrician Combo Kit

- Fluke 87V True RMS Multimeter
- TL224 SureGrip™ Silicone Test Lead Set
- TP238 SureGrip™ Slim Reach Test Probe Set (insulated tips with 4 mm of exposed metal)
- AC 220 SureGrip™ Alligator Clip Set
- Magnetic Hanger
- 80BK Temperature Probe
- C800 Hard Case



Electronics Combo Kit

- Fluke 179 True RMS Multimeter
- TL224 SureGrip™ Silicone Test Lead Set
- TL910 Electronic Test Probe Set
- AC280 SureGrip™ Hook Clip Set
- 80BK Integrated DMM Temperature Probe
- C800 Hard Meter and Accessory Case

Save 24%



Industrial Combo Kit

- Fluke 179 True RMS Multimeter
- TL224 SureGrip™ Silicone Test Lead Set
- AC220 SureGrip™ Alligator Clip Set
- TP4 Slim Reach Test Probe Set (4 mm)
- 80BK Integrated DMM Temperature Probe
- C800 Hard Meter and Accessory Case
- + Maglite flashlight

Save 17%



Electrician's Combo Kit

- Fluke 112 True RMS Multimeter
- Fluke 322 Clamp Meter
- TL76 All-in-one Test Lead Set
- C800 Hard Meter and Accessory Case

Save 23%



Multimeter and Infrared Thermometer Combo Kit

- Fluke 179 True RMS Multimeter
- Fluke 61 Infrared Thermometer
- C800 Hard Meter and Accessory Case

Save 19%

Ordering Information

Fluke 87V/E	Industrial Electrician Combo Kit
Fluke 179/MAG Kit	Industrial Combo Kit
Fluke 179/EDA Kit	Electronics Combo Kit
Fluke 112/322 Kit	Electrician's Combo Kit
Fluke 179/61 Kit	Multimeter and Infrared Thermometer Combo Kit
Fluke 189/FVF	189/FlukeView Combo Kit



189/FlukeView Combo Kit

- Fluke 189 True RMS Multimeter
- FVF-SC2 FlukeView Forms Software

Save 19%



Fluke 189



Fluke 187



On all inputs

LISTED



True RMS

Included Accessories

TL71 silicone test leads, probe holder, two AC72 alligator clips, 4 AA batteries (installed), user manual, calibration certificate with measurement data.

Ordering Information

Fluke 187	True RMS Multimeter
Fluke 189	True RMS Multimeter
Fluke 189/FVF	FlukeView Combo Kit
	See page 14
FVF-SC2	FlukeView Forms software including interface cable

Solve complex problems with advanced measurement functions, accuracy and data logging

The Fluke 189 and 187 are the most advanced meters with the features, precision and accuracy to troubleshoot power distribution, industrial automation, process controls and electronic and electro-mechanical equipment in the field or on the bench. Model 189 has a built-in data

logger to record measurements unattended without a PC. Recorded data can be viewed on the 189 or transferred to a PC with optional FlukeView® Forms software.

Features

	187	189
True-RMS measurements	AC, AC+DC	AC, AC+DC
Bandwidth (voltage/current)	100kHz / 100kHz	100kHz / 100kHz
Digital display counts (default/selectable)	50000 / 5000	50000 / 5000
Multiple display with large digits and backlight, updates 4 times per second	●	●
Analog bargraph segments, updates 40 times per second	51-segments	51-segments
Min-Max-Average recording with relative time stamp	●	●
Fast Min-Max recording	250µsec	250µsec
AutoHOLD® and Relative modes for reference and offset measurements	●	●
Temperature readings using optional K-type thermocouple and adapter	●	●
Audible continuity and diode test	●	●
Duty cycle and pulse width measurements	●	●
PC interface for data exchange and closed case calibration	●	●
Memory for storing up to 3 days of continues stand-alone logging		●
Readings memory (memory locations)		100
Easy battery and fuse exchange without opening the complete case	●	●
Ergonomic case with integrated protective holster	●	●

Specifications

(Check the Fluke web for detailed specifications)

Functions	Maximum	Max. resolution	187 and 189**
Voltage DC	1000V	1µV	±(0.025%+5)
Voltage AC	1000V	1µV	±(0.4%+40)
Current DC	10A	0.01µA	±(0.15%+2)
Current AC	10A	0.01µA	±(0.75%+5)
Resistance	500MΩ	0.01Ω	±(0.05%+2)
Conductance	500nS	0.01nS	±(1.0%+10)
Capacitance	50000µF	0.001nF	±(1.0%+5)
Frequency	1MHz	0.01Hz	±(0.005%+1)
Temperature	-200°C/+1350°C	0.1°C	±(1%+1°C)
dBm and dBV	-52/+60dB	0.01dB	± 0.1 dB

Accuracies are best accuracies for each function.

** 187 and 189 accuracy and resolution are stated for 50,000 counts.

Battery Life: 72 hours typical (alkaline)
Size (HxWxD): 203 mm x 100 mm x 50 mm

Weight: 0.545 kg
Lifetime Warranty

Recommended Accessories



C125
See page 70



TL910
See page 64



TL81A
See page 64



FVF-SC2
See page 72



TPAK
See page 72

New



Fluke 87V



Fluke 83V

Performance and accuracy for maximum industrial productivity

The new Fluke 80 Series V has 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 new 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.

Features

	83V	87V
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 and fuse exchange without opening the complete case	●	●

Specifications

(Check the Fluke web for detailed specifications)

Functions	Maximum Range	83V		87V*	
		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 6,000 counts and resolution for 20,000 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
Lifetime Warranty



On all inputs

LISTED



Included Accessories

TL75 test leads, AC72 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/E Industrial Electrician Combo Kit
See page 14

Recommended Accessories



C90
See page 70



TL238
See page 62



i410/i1010
See page 67



TPAK
See page 72



L215
See page 72

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

LISTED



Included Accessories

Test leads with 4 mm lantern tips and protective cap, 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/EDA Kit	Electronics Combo Kit
Fluke 179/MAG Kit	Industrial Combo Kit
Fluke 179/61 Kit	Multimeter and IR Thermometer Kit
	See page 14

	175	177	179
True-RMS measurements	AC	AC	AC
Digital display counts, updates 4 times per second	6000	6000	6000
Display backlight		●	●
Analog bargraph / segments, updates 40 times per second	33-segments	33-segments	33-segments
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 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	1000V	0.1mV	±(0.15%+2)	±(0.09%+2)	±(0.09%+2)
Voltage AC	1000V	0.1mV	±(1.0%+3)	±(1.0%+3)	±(1.0%+3)
Current DC	10A	0.01mA	±(1.0%+3)	±(1.0%+3)	±(1.0%+3)
Current AC	10A	0.01mA	±(1.5%+3)	±(1.5%+3)	±(1.5%+3)
Resistance	50MΩ	0.1Ω	±(0.9%+1)	±(0.9%+1)	±(0.9%+1)
Capacitance	10000µF	1nF	±(1.2%+2)	±(1.2%+2)	±(1.2%+2)
Frequency	100kHz	0.01Hz	±(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



C90
See page 70



TLK-220
See page 62



TL76
See page 62



i410-i1010
See page 67

110 Series Digital Multimeters

Compact general purpose meters

The 110 series True-RMS meters have all the basic measurement features and functions needed for every day tasks. Their simplicity, compact design, and price make them perfect for quick verifications for field service and contractor use.



Fluke 112



Fluke 111



Fluke 110



On all inputs

LISTED



Included Accessories

Test leads with 4 mm lantern tips and protective cap, C10 holster, installed 9V battery and users manual.

Ordering Information

Fluke 110 True RMS Multimeter
 Fluke 111 True RMS Multimeter
 Fluke 112 True RMS Multimeter
 Fluke 112/322 Electricians Combo Kit
 See page 14

Features

	110	111	112
True-RMS measurements	AC	AC	AC
Digital display counts, updates 4 times per second	6000	6000	6000
Display backlight			●
Analog bargraph / segments, updates 40 times per second	33-segments	33-segments	33-segments
Auto and Manual ranging	●	●	●
Display Hold	●	●	●
Min-Max-Average recording mode with Min/Max Alert	●	●	●
Audible continuity and diode test	●	●	●
Test lead alert	●	●	●
Unsafe voltage alert warns for voltages above 30V	●	●	●
Low battery indication	●	●	●
Compact case with removable holster	●	●	●
Easy battery exchange without opening the complete case	●	●	●
Selectable sleep mode preserves battery life	●	●	●

Specifications

(Check the Fluke web for detailed specifications)

Functions	Maximum	Max. resolution	110	111	112
Voltage DC	600V	1mV	±(0.7%+2)	±(0.7%+2)	±(0.7%+2)
Voltage AC	600V	1mV	±(1.0%+3)	±(1.0%+3)	±(1.0%+3)
Current DC	10A	1mA		±(1.0%+3)	±(1.0%+3)
Current AC	10A	0.01A		±(1.5%+3)	±(1.5%+3)
Resistance	40MΩ	0.1Ω	±(0.9%+1)	±(0.9%+1)	±(0.9%+1)
Capacitance	10000µF	1nF	±(1.9%+2)	±(1.9%+2)	±(1.9%+2)
Frequency	50kHz	0.01Hz	±(0.1%+2)	±(0.1%+2)	±(0.1%+2)

Accuracies are best accuracies for each function
Battery Life: Alkaline, 300 hrs typical
Size (HxWxD): 160 mm x 96 mm x 46 mm

Weight: 0.35 kg
Three Year Warranty

Recommended Accessories



C50
See page 70



TL223
See page 62



TL76
See page 62



MC6
See page 71



TPAK
See page 72

73/77 Digital Multimeters

All-round performers for basic measurement tasks

The model numbers Fluke 73 and 77 are an important part of Fluke's reputation. In many years of service they have become the preferred models for a large number of professionals. The Fluke 73 and 77 offer exactly the right fit for a wide range of measurements. They are truly all-round performers.

The 73 III is perfectly suited for many electronic applications and has the "classic" 70 series design with removable holster. The 77 III has all the features and functions for a wide range of industrial applications packaged in an ergonomic case with integrated holster.



Fluke 77 III



Fluke 73 III

Features

	73 III	77 III
Digital display counts	3200	3200
High contrast digital display with large digits		●
Analog bargraph/segments	31	31
Auto and Manual ranging	●	●
Automatic Touch Hold*	●	●
Audible continuity / diode test	●	●
Ergonomic case with integrated holster		●
"Classic" design with removable holster	●	
Sleep Mode preserves battery life	●	●
EN 61010-1 safety rating	CAT II 600V	CAT III 600V CAT II 1000V



On all inputs
(Fluke 77 III)

LISTED



Specifications

Function	Maximum	Max. resolution	73 III	77 III
Voltage DC	600V 1000V	0.1mV 0.1mV	±(0.3% + 1)	±(0.3% + 1)
Voltage AC	600V 1000V	1mV 1mV	±(2.0% + 2)	±(2.0% + 2)
Current DC	10A	0.01mA	±(1.5% + 2)	±(1.5% + 2)
Current AC	10A	0.01mA	±(2.5% + 2)	±(2.5% + 2)
Resistance	32MΩ	0.1Ω	±(0.5% + 1)	±(0.5% + 1)

Accuracies are best accuracies for each function.

Battery Life: 2000 hours typical

Size (HxWxD): 73 III 188 mm x 85 mm x 48 mm

77 III 190 mm x 89 mm x 45 mm

Weight: 73 III 0.45 kg

77 III 0.42 kg

Lifetime Warranty

Included Accessories

73 III: TL75 test leads, operator's manual, 9V battery (installed) and C70Y holster

77 III: TL75 test leads, operator's manual, 9V battery (installed)

Ordering Information

Fluke 73 III Multimeter

Fluke 77 III Multimeter

Recommended Accessories



C50
See page 70



TLK220
See page 62



TL76
See page 62



i400
See page 67



80TK
See page 68

27 Sealed Digital Multimeter

Completely sealed to prevent entry of water and contaminants



Fluke 27

A special extra ruggedized case with o-rings prevents water from entering the input jacks and switches. Use this meter in very harsh, wet or dusty locations. Meets MIL STD 28800 military specifications for vibration, shock, and water resistance.

Features

	27
Digital Display/Counts	3200
Analog Bar Graph/Segments	31
Fast Auto and Manual Ranging	●
Touch Hold*	●
Rugged, O-Ring Sealed Case	●
Separate, Sealed Battery/Fuse Door	●
Operates from -15°C to +55° and 95% Relative Humidity	●
Meets Military Shock, Vibration and Water Resistance Requirements	●
Min/Max Relative Mode	●
Audible Continuity/Diode Test	●
Superior EMI Shielding	●

Specifications

Function	Range & Resolution	Best Accuracy
Voltage DC	320.0mV, 3.200V, 32.00V, 320.0V, 1000V	±(0.1% +1)
Voltage AC	320.0mV, 3.200V, 32.00V, 320.0V, 1000V	±(0.5% +3)
Current DC	320.0µA, 3.200 mA, 32.00 mA, 320.0 mA, 10A	±(0.75% +2)
Current AC	320.0µA, 3.200 mA, 32.00 mA, 320.0 mA, 10A	±(1.5% +2)
Resistance	320Ω, 3.200kΩ, 32.00kΩ, 320.0kΩ, 3.200MΩ, 32.00MΩ	±(0.2% +1)
Conductance	32.00ns	±(2% +10)

Range & Resolution: If selected range is 3.200V the resolution is 0.001V in that range

Battery Life: Typically over 1000 hours (alkaline)

Size (HxWxD): 203 mm x 95 mm x 56 mm

Weight: 0.75 kg

Lifetime Warranty



On all inputs

LISTED



Included Accessories

TL75 right-angle test leads, two insulated AC72 alligator clips, spare fuse, 9 Volt battery and operator's manual.

Ordering Information

Fluke 27 Multimeter

Recommended Accessories



C25
See page 70



C550
See page 70



TL220
See page 62



AC285
See page 63



i200
See page 66

12/16 Digital Multimeters



Basic digital meters with automatic AC/DC sensing

The Fluke 12 and 16 are ideal for first-level troubleshooting. The VChek™ function provides the user with ultimate ease of use by automatic switching to AC voltage, DC voltage or resistance measurements depending on the input. The Fluke 16 has extra capabilities for measuring temperature, current for flame sensor measurements, capacitance, plus recording of minimum and maximum values over time with a relative time stamp.

Features

	12	16
Digital display counts	4000	4000
Auto and Manual ranging	●	●
VChek™ automatic measurement selection	●	●
Audible continuity/diode test	●	●
Continuity Capture locates 250µs intermittent opens	●	●
Min/Max recording over time with relative time stamp	●	●
Rotary measurement selection switch		●
Removable holster		●
Sleep Mode preserves battery life	●	●
Temperature		●
Microamps		●

Specifications

Functions	Maximum	Max. resolution	12	16
Voltage DC	600V	1mV	±(0.9%+1)	±(0.9%+1)
Voltage AC	600V	1mV	±(1.9%+3)	±(1.9%+3)
Current DC	200µA	0.1µA		±(1%+2)
Current AC	200µA	0.1µA		±(2%+3)
Resistance	40MΩ	0.1Ω	±(0.9%+1)	±(0.9%+1)
Capacitance	10000µF	0.001µF	±(1.9%+2)	±(1.9%+2)
Temperature	-40/+400°C	0.1°C		±(1%+0.8°C)

Accuracies are best accuracies

Battery Life: Alkaline, 650 hours continuous
Carbon-zinc, 450 hours continuous

Size (HxWxD):

12: 144 mm x 69 mm x 39 mm

16: 159 mm x 77 mm x 48 mm

Weight: 12: 0.29 kg
16: 0.44 kg
Three Year Warranty



Included Accessories

TL75 test leads, 9V battery (installed) and operator's manual. In addition the Fluke 16 includes the 80BK temperature accessory, and C10 Holster.

Ordering Information

Fluke 12 Multimeter

Fluke 16 Multimeter

Recommended Accessories



C12A
See page 70



i200s
See page 66



80AK
See page 68



80PK-26
See page 68



MC6
See page 71

78 and 88V Automotive Meters



Fluke 78



Fluke 88V/A



On all inputs
Fluke 88V

LISTED



Included Accessories

Fluke 88V/A: H80M Holster with TPAK Meter Hanging Solution, TL224 SureGrip Silicone Test Lead Set, TP220 SureGrip Test Probe Set, AC285 SureGrip Large Jaw Alligator Clip Set, 80BK Integrated Temperature Probe, RPM80 Inductive Pickup Probe, C800 Hard Case, User's Manual + Quick Reference Guide

Fluke 78: C70Y Holster, TL75 Test Lead Set, AC72 Alligator Clip Set, 80BK Integrated Temperature Probe, User's Manual + Quick Reference Guide

Ordering Information

Fluke 88V/A Automotive Meter Combo Kit
Fluke 78 Automotive Meter

The right meters 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 78 or Fluke 88V have

features that can check frequency, duty cycle, make diode tests, and measure temperature, pressure and vacuum.

Features

	78	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 Recording	●	
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	optional	●
Hard Meter Case		●
Safety rating	CAT II 300 V	CAT III 1000V, CAT IV 600 V

Specifications

	Fluke 78			Fluke 88V		
	Range	Resolution	Accuracy	Range	Resolution	Accuracy
Voltage DC	300V	0.1mV	0.3%	1000V	0.1mV	0.1%
Voltage AC	300V	1mV	2.5%	1000V (5 kHz)	0.1mV	0.5%
Current DC	10A	1mA	1%	10A	0.1μA	0.4%
Current AC	10A	10mA	2%	10A	0.1μA	1.2%
Resistance	40MΩ	0.1Ω	0.5%	40Ω	0.1Ω	0.4%
Capacitance				10mF	0.01nF	1%
Frequency	100kHz	0.01Hz	0.1%	200kHz	0.01Hz	0.005%
Temperature	1000°C	1°C	1%	1090°C	0.1°C	1%

Battery Life: 88V – Over 400 hours typical (alkaline)
78 – 2000 hours typical

Weight: 88V – 0.36 kg; 78 – 0.34 kg
Lifetime Warranty

Size (HxWxD): 88V – 186 mm x 86 mm x 32 mm
78 – 166 mm x 75 mm x 28 mm

Recommended Accessories



TLK-282
See page 65



90i-610s
See page 65



80PK-27 (requires 80AK)
See page 68



PV350
See page 65



Fluke 867B



On all inputs

LISTED



Included Accessories

TL71 test leads and users manual.
BP7217 Battery Pack and BE860
Battery Eliminator.

Ordering Information

Fluke 867B Graphical Multimeter
SC860 FlukeView 860 Software and
optically-isolated RS-232 cable
(PM9080)

High performance multimeter with advanced graphics and reporting capabilities

The Graphical™ Multimeter combines the industry's most advanced multimeter capabilities with the visual power of trend graphing and waveform display, component testing, and logic checking together in one easy-to-use, handheld instrument.

The Fluke 867B features:

- 0.025% dc accuracy for critical measurements
- Big, bold GMM display, shows multiple numeric readings and waveforms simultaneously.
- Optically isolated, RS-232 interface for printing and transferring measurement data, FlukeView™ 860 software provides a communication link with PC's, for documentation, analysis and storage.
- TrendGraph™ works like an electronic chart recorder, plotting high resolution meter readings for up to 30 hours, in intervals from 1 second to 15 minutes
- Component test for checking component signatures on resistors, capacitors, semiconductors and more

Features

	867B
Digital Display/Counts	30 000
True-RMS Measurements	●
High Impedance Input	●
Resistance/Conductance/Capacitance/Continuity	●
Min/Max/Avg with Time Stamp	●
Relative Mode	●
dB	●
Logic Activity	●
Component Test	●
Bright Backlight	●
Rechargeable Batteries/Line Adapter	●
Waveform memory	●

Specifications

Function	Range & Resolution	Best Accuracy 867B
Voltage DC	300.00mV, 3.000V, 30.000V, 300.00V, 1000.0V	±(0.025% + 2)
Voltage AC	300.00mV, 3.000V, 30.000V, 300.00V, 1000.0V	±(0.5%+4)
Current DC	300.00µA, 3000.0µA	±(0.1%+2)
	30.000mA, 300.00mA, 3.000A, 10.000A	±(0.05%+15)
Current AC	300.00µA, 3000.0 µA	±(0.75%+10)
	30.000mA, 300.00mA, 3.000A, 10.000A	±(0.75%+10)
Resistance	300.00Ω, 3.0000kΩ, 30.000kΩ, 300.00kΩ, 3.0000MΩ, 30.000MΩ	±(0.7%+2)
Capacitance	10000pF, 1000µF, 1.000µF, 10.00µF, 100.0µF, 1000µF, 10000µF	±(1.9%+2)
dB/dBm	2 - 1200 Ohm References	±0.5dB
Frequency	1000.00Hz, 10.0000kHz, 100.000kHz, 1.00000MHz, 2.0000MHz	±(0.05%+1)
	10.0000MHz	±(0.05% + 1)
Meter VAC bandwidth	300kHz	

Range & Resolution: If selected range is 3.000V the resolution is 0.001V in that range

Size (HxWxD): 246.4 mm x 137.2 mm x 69.9 mm

Weight: Without batteries: 1.1 kg. With battery pack: 1.4 kg

Three Year Warranty

Recommended Accessories



C789
See page 70



TL81A
See page 64



TL910
See page 64



I410/I1010
See page 67



SC860



Fluke 45

Maximum versatility in a single instrument

The Fluke 45 is a feature-rich 5-digit, 100 000 count meter that truly fits all applications and virtually any measurement need - on the workbench or in the field. Two multifunction displays and 16 different measurement capabilities allow wide ranging versatility. The Fluke 45 delivers high performance and flexibility for manufacturing test, depot and field service, as well as R&D applications.

Use optional FlukeView® Forms software to communicate through the Fluke 45's standard serial port.

Features

	45
Multifunction Vacuum Fluorescent Dual Display	●
True-RMS Voltage and Current Measurement, including AC + DC	●
0.05% DC Current Accuracy for 4-20 mA Current Loop Service	●
Standard RS-232 Interface	●
Optional IEEE-488.2 Interface	●
Frequency Measurement to 1 MHz	●
dB Measurements	●
Min/Max Mode	●
Relative Mode	●
Compare (Hi/Lo/Pass) for Quick In-Tolerance Tests	●
Closed Case Calibration	●
Optional: Rack-Mount Kit	●
Touch Hold*	●
Diode Test/Continuity	●



Specifications

Display: 3000 Counts, 30 000 Counts, 100 000 Counts
Reading Rates: Fast (20 times per second), Medium (5 times per second), Slow (2.5 times per second)

Function	Range	Best Accuracy (medium reading rate)	Resolution
Voltage DC	300mV-1000V	±0.025% + 2	1 µV-0.01V
Voltage AC (True-RMS, AC Coupled) Freq. 20 Hz-100 kHz	300mV-750V	±0.2% + 10	1 µV-0.01V
dB Readout (600 Ω Ref.) (Ref. Z 2 Ω -8000Ω)	-34-+60	±0.08 dBm	0.01 dB-0.1 dB
Current DC	30 mA-10A	±0.05% + 2	0.1 µA-10 mA
Current AC (True-RMS, AC Coupled) Freq. 20 Hz-20 kHz	10 mA-10A	±0.5% + 10	0.1 µA-10 mA
Resistance	300Ω-100 MΩ	±0.05% + 2	0.001Ω-1 MΩ
Frequency	5 Hz->1 MHz	±0.05% + 1	0.01 Hz-1 kHz

Range & Resolution: If selected range is 100.000mV the resolution is 0.001mV in that range

Size (H x W x D): 216 mm x 93 mm x 286 mm

Weight: Net 2.4 kg; with battery 3.2 kg

One Year Warranty

Included Accessories

Line cord, TL 71 test leads, operator's manual, and Quick Reference Guide.

Options

Field/customer installable: Fluke 45-01K Rechargeable Lead-Acid Battery Kit
Fluke 45-05K IEEE-488.2 Interface Kit

Optional Accessories

M00-200-634 Rack Mount Kit
RS40 6' RS-232 Terminal Cable
RS41 6' RS-232 Modem Cable

Ordering Information

Fluke 45 Dual Display Multimeter
Fluke 45-01 with Factory-Installed Battery
Fluke 45-05 with Factory-Installed IEEE-488.2 Interface
Fluke 45-15 with Factory-Installed Battery and IEEE-488.2 Interface
FVF-SC3 FlukeView Forms software including interface cable

Recommended Accessories



TL81A
See page 64



TL910
See page 64



TL40
See page 64



TLK-225
See page 62



FVF-SC3
See page 72