Fluke 87V Max Digital Multimeter and Test Leads
Ideal for solar installations and troubleshooting PV arrays

The 87V MAX is the ideal electrical troubleshooting solution for solar inverters, combiner boxes and battery storage systems. The 87V MAX is built with an IP67 rated, industrial-strength case and a removable holster. The holster doubles as a test probe holder for easier, one-handed operation. This meter is fully waterproof and dust proof keep working reliably no matter where your job takes you. Safely connect the MC4 test leads to the meter to validate voltage from individual panels or a series of panels in a PV array.

Features

87V MAX True-rms Digital Multimeter

- **Withstands drops up to 4-meters (13 feet) with industrial strength casing and holster**
- **Waterproof, dustproof IP67 case for the most extreme work sites**
- **Premium TL175 TwistGuard™ test leads**
- **Double the battery life of the 87V (up to 800 hours); backlit keys for dark environments**

Pomona MC4 Leads

- **Allow for connections to test tools that accept 4mm banana plugs**
- **Ensures safe current and voltage measurements on PV modules and systems**
- **For use in regular tests and measurements on PV panels**
- **Connect measuring devices to PV power station, to set and troubleshoot PV panels**
- **Complies to CAT III 1000V / CAT IV 600V, 20A ratings in accordance to IEC / EN 61010-031**

Included with Product

- Fluke 87V MAX True-rms Digital Multimeter
- TL175 TwistGuard® test leads
- AC175 Alligator clips
- 80BK-A temperature probe
- Removable holster with test lead storage
- Three AA batteries (installed)
- Pomona PVLEAD1 MC4 to 4 mm Test Lead Set

Basic Product Specifications

87V MAX General Specifications	
DC Voltage	
Range	0.1 mV to 1000 V
Accuracy	± (0.05% + 1)
Maximum resolution	0.1 mV
AC Voltage	
Range	0.1 mV to 1000 V
Accuracy	± (0.7% + 4) true-rms
AC bandwidth	20 kHz with low pass filter; 3 dB @ 1 kHz
Maximum resolution	0.1 mV
DC Current	
Range	0.1 µA to 10 A (20 A for 30 seconds maximum)
Amps accuracy	± (0.2% + 2)
Maximum resolution	0.1 µA
AC Current	
Range	0.1 µA to 10 A (20 A for 30 seconds maximum)
Amps accuracy	± (1.0% + 2) true-rms
Maximum resolution	0.1 µA
Resistance	
Range	0.1 Ω to 50 MΩ
Accuracy	± (0.2% + 1)
Maximum resolution	0.1 Ω

Capacitance	
Range	0.01 nF to 9999 µF
Accuracy	± (1% + 2)
Maximum resolution	0.01 nF
Frequency	
Range	0.5 Hz to 199.99 kHz
Accuracy	± (0.005% + 1)
Maximum resolution	0.01 Hz
Duty Cycle	
Maximum duty cycle	99.9%
Accuracy	± (0.2% per kHz + 0.1%)
Maximum resolution	0.1%
Temperature	
Temperature measurement range	–200.0 °C to 1090 °C –328.0 °F to 1994.0 °F excluding probe
80 BK temperature probe	–40.0 °C to 260 °C, ± 2.2 °C or 2% whichever is greater –40.0 °F to 500 °F, ± 4.0 °F or 2% whichever is greater
Conductance	
Maximum conductance	60.00 nS
Accuracy	± (1.0% + 10)
Maximum resolution	0.01 nS
Diode test	
Range	2 V
Resolution	0.001V
Accuracy	± (1% + 1)
Diagnostics and data storage	
Peak Min/Max	250 µS
Min/Max/Avg	Yes
Reading hold/Auto (Touch) Hold	Yes
Relative reference	Yes
Display	
Digital	6000 counts updates 4/second 19,999 counts in high–resolution mode
Analog bar graph	32 segments, updates 40/second
Backlight	Two level
Low pass filter (VFD measurements)	
Low pass filter (VFD measurements)	Yes
Input Alert™	
Input Alert™	Yes
Safety Specifications	
Safety rating	IEC61010-1: Pollution Degree 2 IEC 61010-2-033: CAT IV 600 V, CAT III 1000 V
Agency approvals	CE, CSA
Mechanical and General Specifications	
IP rating	IEC 60529: IP67

Power	Three AA batteries. 800 hours typical, without backlight
Size	6.0 x 10.1 x 21.5 cm (with holster)
Weight	698.5 g (with holster)
Warranty	Limited lifetime
Environmental Specifications	
Operating temperature	-15 °C to 55 °C, to -40 °C for 20 minutes when taken from 20 °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

PVLEAD1 MC4 Solar Clamp Test Lead Set General Specifications	
Contact	Brass, Nickel Plated
Length	60”
Voltage	CAT III 1000V, CAT IV 600V
Current	20 amp
Standards	IEC 61010-031