

TECHNICAL DATA

# Fluke 87V MAX E2 Industrial Electrician Combo Kit



## Key features

All functionality of the 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

Plus ...

- Fully insulated 3 mm exposed metal test probes for electricians working in high energy environments
- TPAK magnetic hanging strap lets you attach the meter to any ferrous surface, such as cabinets and iron pipes.

## Product overview: Fluke 87V MAX E2 Industrial Electrician Combo Kit

The 87V MAX E2 Industrial Electrician Combo Kit contains all the trusted features of the most popular DMM used today, the Fluke 87V, plus much more.

Withstands drops up to 4-meters (13 feet)

Fluke's most rugged digital multimeter. The 87V MAX is built with an industrial strength case and a removable holster. The holster doubles as a test probe holder for one-handed operation.

IP67 rated

Fully waterproof and dust proof, to work reliably in all the places that you need to work.

Withstands heat and cold

The meter has an extended operating temperature range of -40 °C (for up to 20 minutes) to +55 °C.

The right probes and clips for the toughest jobs

The 87V MAX E2 kit come with TL224 SureGrip™ Insulated Test Leads, AC220 SureGrip™ Alligator Clips and TL238 SureGrip™ Test Probes. Plus the ToolPak™ Magnetic Meter Hanging Kit, so your meter is always where you can see and still keep both hands free.

Other product highlights

- True-rms ac voltage and current for accurate measurements on non-linear signals
- Measure up to 1000 V ac and dc
- Measure up to 10 A (20 A for 30 seconds)
- Frequency to 200 kHz
- Built-in temperature function conveniently allows you to take temperature readings without having to carry a separate instrument using supplied thermocouple
- Min/Max/Average recording, plus 250 µs Peak min-max to capture variations automatically
- Unique function for accurate voltage and frequency measurements on variable frequency motor drives (VFDs) and other electrically noisy equipment
- Large display digits, 2-level bright white backlight and backlit keypad buttons for increased visibility
- Hi resolution 19,999 count display mode
- Long battery life (800 hours)

Comparison – 87V MAX and 87V

	87V MAX	87 V
<b>IP Rating</b>	IP 67	IP 30
<b>Battery life</b>	800 hours	400 hours
<b>Drop test</b>	4 meters	3 meters
<b>True-rms readings</b>	ac	ac
<b>Basic dc accuracy</b>	0.05%	0.05%
<b>Voltage ac/dc</b>	1000 V	1000 V
<b>Current ac/dc</b>	10 A	10 A
<b>Resistance</b>	50 MΩ	50 MΩ
<b>EN61010-1 CAT III</b>	1000 V	1000 V
<b>EN61010-1 CAT IV</b>	600 V	600 V
<b>Warranty (years)</b>	Limited lifetime	Limited lifetime

## Specifications: Fluke 87V MAX E2 Industrial Electrician Combo Kit

Electrical Specifications		
DC Voltage	<b>Range</b>	0.1 mV to 1000 V
	Accuracy	±(0.05% + 1)
	Maximum Resolution	0.1 mV

AC Voltage/td>	<b>Range</b>	0.1 mV to 1000 V
	Accuracy	$\pm(0.7\% + 4)$ true-rms
	AC Bandwidth	20 kHz with low pass filter; 3 dB @ 1 kHz
	Maximum Resolution	0.1 mV
DC Current	Range	0.1 $\mu$ A to 10 A (20 A for 30 seconds maximum)
	Amps accuracy	$\pm(0.2\% + 2)$
	Maximum resolution	0.01 $\mu$ A
AC Current	<b>Range</b>	0.1 $\mu$ A to 10 A (20 A for 30 seconds maximum)
	Amps accuracy	$\pm(1.0\% + 2)$ true-rms
	Maximum resolution	0.1 $\mu$ A
Resistance	<b>Range</b>	0.1 $\Omega$ to 50 M $\Omega$
	Accuracy	$\pm(0.2\% + 1)$
	Maximum resolution	0.1 $\Omega$
Capacitance	<b>Range</b>	0.01 nF to 9999 $\mu$ F
	Accuracy	$\pm(1\% + 2)$
	Maximum resolution	0.01 nF
Frequency	Range	0.5 Hz to 199.99 kHz
	Accuracy	$\pm(0.005\% + 1)$
	Maximum resolution	0.01 Hz
Duty Cycle	<b>Maximum duty cycle</b>	99.9%
	Accuracy	$\pm(0.2\%$ per kHz + 0.1%)
	Maximum Resolution	0.1%
Temperature measurement range	-200.0 $^{\circ}$ C to 1090 $^{\circ}$ C -328.0 $^{\circ}$ F to 1994.0 $^{\circ}$ F excluding probe	
80 BK Temperature Probe	-40.0 $^{\circ}$ C to 260 $^{\circ}$ C, $\pm 2.2$ $^{\circ}$ C or 2% whichever is greater -40.0 $^{\circ}$ F to 500 $^{\circ}$ F, $\pm 4.0$ $^{\circ}$ F or 2% whichever is greater	
Conductance	<b>Maximum conductance</b>	60.00 nS
	Accuracy	$\pm(1.0\% + 10)$
	Maximum Resolution	0.01 nS
Diode test	<b>Range</b>	2 V
	Resolution	0.001 V
	Accuracy	$\pm(1\% + 1)$
Diagnostics and data storage	Peak Min/Max	250 $\mu$ S
Min/Max/Avg	Yes	

Reading hold/Auto (Touch) Hold	Yes	
Relative reference	Yes	
Display	<b>Digital</b>	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)	Yes	
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	<b>Three AA batteries.</b> 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

## Ordering information



### FLUKE-87V-MAX/E2 KIT

Fluke 87V MAX E2 Industrial Electrician Combo Kit

Includes:

- Fluke 87V MAX True-rms Digital Multimeter
- TL224 SureGrip™ Insulated Test Leads
- AC220 SureGrip™ Alligator Clips
- TL238 SureGrip™ Test Probes
- ToolPak™ Magnetic Meter Hanging Kit
- 80BK-A DMM Temperature Probe
- C35 Soft Carrying Case
- Three AA batteries (installed)

#### Optional accessories

**Fluke TPAK ToolPak™ Magnetic Meter Hanger**

#### Description

Powerful magnetic strap for safe, hands free measurements.

**Fluke C115 Soft Carrying Case**

Includes two padded pockets for protection of two test tools, such as a digital multimeter and 60 Series IR thermometer and a pouch for test leads and other accessories.

**Fluke i1010 AC/DC Current Clamp**

Highly reliable, measures 1 A to 1000 A and provides accurate current reading without breaking the circuit. Buy Online Now.

**Fluke insulated hand tools starter kit**

8-piece kit has the most popular screwdrivers, pliers and cutters.



**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](http://www.fluke.com)

©2022 Fluke Corporation.  
Specifications subject to change without notice.  
01/2022

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