

## TECHNICAL DATA

# Fluke 87V/E2 Industrial Electrician Combo Kit



## Key features

All functionality of the 87V Industrial Digital Multimeter, plus:

- Fully insulated 3 mm exposed metal test probes for electricians working in high energy environments
- C35 Soft Carrying Case holds meter, test leads and other accessories
- TPAK magnetic hanging strap lets you attach the meter to any ferrous surface, such as cabinets and iron pipes.

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

Ideal for electricians, this combo kit is built around the Fluke 87V, the most widely used industrial digital multimeter in the world and includes essential accessories to make you even more productive. This kit offers 15% savings compared with the individual price of all the accessories. Plus you'll be working with the most trusted tools in the world.

Assembled in the USA. Lifetime warranty.

The Fluke 87V/E2 Industrial Electrician Combo Kit is designed and assembled in the USA. The 87V multimeter is backed by a limited lifetime warranty, so you can rely on your DMM every time you take it out of your tool box.

### Solve the difficult problems

Working on VSDs/VFDs: Take accurate voltage, current and frequency measurements on the output side of the drive at either the drive itself or at the motor terminals.

Industrial troubleshooting: Get the resolution and accuracy you need to solve more problems on motor drives, in-plant automation, power distribution, and electromechanical equipment.

Checking power quality: Capture glitches and spikes as short as 250  $\mu$ s. Identify irregular signals.

### Advanced measurement functions

- True-rms ac measurements
- 0.05% dc accuracy
- 6,000 counts, 3-3/4 digit resolution, or 20,000 counts, 4-1/2 digit—resolution
- 10 A ac or dc (with test leads and current jacks) with 0.1  $\mu$ A resolution
- Temperature measurements up to 1090 °C with included thermocouple probe
- Provides 10,000  $\mu$ F capacitance range for components and motor caps
- Provides peak capture and Min/Max/Avg recording to capture intermittent as short as 250  $\mu$ s
- Easy access door for fast battery changes without breaking the calibration seal
- Fits into an optional magnetic hanger for easy set-up and viewing while freeing your hands for other tasks
- Presents a large digit display with bright, two-level backlight for easier reading in low light
- Includes an analog bar graph for fast changing or unstable signals
- Auto and manual ranging for maximum flexibility
- Relative mode to calculate and display difference between two readings
- Holds readings on display for safe viewing after removing probes using Touch Hold technology

### Electrical Safety

All inputs are protected to CAT IV 600 V, CAT III 1000 V. They can withstand impulses in excess of 8.000 V and reduce risks related to surges and spikes.

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

| Specifications |                           |                                           |
|----------------|---------------------------|-------------------------------------------|
| Voltage DC     | <b>Maximum Voltage</b>    | 1000 V                                    |
|                | Accuracy                  | $\pm(0.05\% + 1)$                         |
|                | Maximum Resolution        | 10 $\mu$ V                                |
| Voltage AC     | <b>Maximum Voltage</b>    | 1000 V                                    |
|                | Accuracy                  | $\pm(0.7\% + 2)$ True RMS                 |
|                | AC Bandwidth              | 20 kHz with low pass filter; 3 db @ 1 kHz |
|                | Maximum Resolution        | 0.1 mV                                    |
| Current DC     | <b>Maximum Amps</b>       | 10 A (20 A for 30 seconds maximum)        |
|                | Amps Accuracy             | $\pm(0.2\% + 2)$                          |
|                | Maximum Resolution        | 0.01 $\mu$ A                              |
| Current AC     | <b>Maximum Amps</b>       | 10 A (20 A for 30 seconds maximum)        |
|                | Amps Accuracy             | $\pm(1.0\% + 2)$ True RMS                 |
|                | Maximum Resolution        | 0.1 $\mu$ A                               |
| Resistance     | <b>Maximum Resistance</b> | 50 M $\Omega$                             |
|                | Accuracy                  | $\pm(0.2\% + 1)$                          |
|                | Maximum Resolution        | 0.1 $\Omega$                              |

|                                       |                                                                      |                                                                     |
|---------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------|
| Capacitance                           | Maximum Capacitance                                                  | 9,999 μF                                                            |
|                                       | Accuracy                                                             | ±(1% + 2)                                                           |
|                                       | Maximum Resolution                                                   | 0.01 nF                                                             |
| Frequency                             | Maximum Frequency                                                    | 200 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 Measurement               | -200.0°C - 1090°C<br>-328.0°F - 1994.0°F<br>excluding probe          |                                                                     |
| 80 BK Temperature Probe               | -40.0°C - 260°C<br>-40.0°F - 500°F, 2.2°C or 2% whichever is greater |                                                                     |
| Conductance                           | Maximum Conductance                                                  | 60.00 nS                                                            |
|                                       | Accuracy                                                             | ±(1.0% + 10)                                                        |
|                                       | Maximum Resolution                                                   | 0.01 nS                                                             |
| Diode                                 | Range                                                                | 3 V                                                                 |
|                                       | Resolution                                                           | 1 mV                                                                |
|                                       | Accuracy                                                             | ±(2% + 1)                                                           |
| Duty Cycle Range                      | Accuracy                                                             | Within ±(02% 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)<br>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                      | UL, CSA, TÜV, VDE listed                                             |                                                                     |
| Mechanical and General Specifications |                                                                      |                                                                     |
| Size                                  | 201 x 98 x 52 mm (with holster)                                      |                                                                     |
| Weight                                | 355 g<br>624 g - with holster                                        |                                                                     |
| Display                               | Digital                                                              | 6000 counts updates 4/sec.<br>19,999 counts in high-resolution mode |
|                                       | Analog                                                               | 32 segments, updates 40/sec.                                        |
|                                       | Frequency                                                            | 19,999 counts, updates 3/sec at > 10 Hz                             |



|              |                                            |                                       |
|--------------|--------------------------------------------|---------------------------------------|
| Warranty     | Lifetime                                   |                                       |
| Battery Life | <b>Alkaline</b>                            | ~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 87V/E2 Kit

Fluke 87V/E2 Industrial Electrician Combo Kit

Includes:

- 87V Industrial 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
- 9V battery (installed)

### Fluke 87V/E2 Kit CAL

Fluke 87V/E2 Industrial Electrician Combo Kit, with a traceable certificate of calibration with data from Fluke

Includes:

- 87V Industrial 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
- 9V battery (installed)
- A traceable certificate of calibration with data from Fluke

**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.  
03/2022

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