

## 80 Series V Industrial True-RMS Multimeter with Temperature

### Accuracy and diagnostic functions for maximum industrial productivity



The new Fluke 87V 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 87V operates very similar to the classic 87, but with more problem-solving power, safety, convenience and impact protection.

#### Features for maximum productivity

- Unique function for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment (87V)
- Built-in thermometer conveniently allows you to take temperature readings without having to carry a separate instrument (87V)
- Large digit display with bright, two-level backlight makes the 80 Series V significantly easier to read than older models

**NEW!** 87V/E2 Industrial Electrician Combo Kit makes troubleshooting more productive with standard meter hanging accessory for hands-free operation, soft case for protection and storage, 1.5 m heat resistant silicone test leads and more.

#### Electrical safety

All inputs are protected to Category III, 1000 V and Category IV 600 V. They can withstand impulses in excess of 8,000 V and reduce risks related to surges and spikes.



### Specifications

| Function                  | Range and resolution                                       | Basic accuracy |                     |
|---------------------------|--|----------------|---------------------|
|                           |  | 83V            | 87V                 |
| DC Volts                  | 600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V                | 0.1 %          | 0.05 %              |
| AC Volts                  | 600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V                | 0.5 %          | 0.7 %<br>(True-rms) |
| DC Current                | 600.0 μA, 6000 μA, 60.00 mA, 600.0 mA, 6.000 A, 10.00 A    | 0.4 %          | 0.2 %               |
| AC Current                | 600.0 μA, 6000 μA, 60.00 mA, 600.0 mA, 6.000 A, 10.00 A    | 1.2 %          | 1.0 %<br>(True-rms) |
| Temperature (excl. probe) | -200 to 1090 °C (-328 to 1994 °F)                          | —              | 1.0 %               |
| 80BK Temperature Probe    | -40 to 260 °C (-40 to 500 °F)                              | —              | 2.2 °C<br>or 2 %    |
| Resistance                | 600.0 Ω, 6.000 kΩ, 60.00 kΩ, 600.0 kΩ, 6.000 MΩ, 60.00 MΩ  | 0.4 %          | 0.2 %               |
| Capacitance               | 10.00 nF, 100.0 nF, 1.000 μF, 10.00 μF, 100.0 μF, 9,999 μF | 1.0 %          | 1.0 %               |
| Frequency                 | 199.99 Hz, 1.9999 kHz, 19.999 kHz, 199.99 kHz              | 0.005 %        | 0.005 %             |



**Comparison chart**

| Feature  | 83V | 87V |
|--|-----|-----|
| True-rms ac voltage and current for accurate measurements on non linear signals    |     | •   |
| Selectable filter for accurate voltage and frequency measurements on motor drives  |     | •   |
| 0.05 % dc accuracy   |     | •   |
| 4-1/2 digit mode for precise measurements  |     | •   |
| Built-in thermometer lets you carry one less tool                                  |     | •   |
| Large display digits and two-level bright white backlight for increased visibility | •   | •   |
| 10,000 µF capacitance range for components and motor caps                          | •   | •   |
| Peak capture to record transients as fast as 250 µs                                |     | •   |
| Measure up to 1000 V ac and dc   | •   | •   |
| Measure up to 10 A, 20 A for up to 30 seconds                                      | •   | •   |
| Auto and manual ranging for maximum flexibility                                    | •   | •   |
| Analog bargraph  | •   | •   |
| Resistance, continuity and diode test  | •   | •   |
| Frequency to 200 kHz and % duty cycle  | •   | •   |
| Min/Max and average recording to capture variations automatically                  | •   | •   |
| Relative mode to remove test lead resistance from low ohms measurements            | •   | •   |
| Improved sleep mode for long battery life  | •   | •   |
| Access door for fast battery changes without breaking the calibration seal         | •   | •   |
| Limited lifetime warranty  | •   | •   |
| Removable holster with built in test lead and probe storage                        | •   | •   |
| Cat IV 600 V and Cat III 1000 V electrical safety ratings                          | •   | •   |
| Basic test leads and alligator clips   | •   | •   |
| Bead type thermocouple temperature probe   |     | •   |

**Included accessories**

Every Fluke 80 Series V meter comes packaged with TL75 Test Leads, AC72 Alligator Clips, holster, 9 V battery (installed), temperature probe (87V only) CD-ROM (user's manual and technical notes) and operator's guide.

**Ordering information**

Fluke-83-5 Industrial Multimeter  
 Fluke-87-5 Industrial True-rms Multimeter with Temperature  
 Fluke-87-5/E2 Industrial Electrician Combo Kit



**Fluke 87V/E2 Industrial Electrician Combo Kit**

Includes special accessories to make industrial troubleshooting even more productive. Save more than \$50\* compared with the individual purchase price.

- A. 87V Industrial Multimeter
- B. **New!** Lightweight soft case for optimal protection and accessory storage
- C. 1.5 m heat resistant silicone test leads
- D. Removable test probes with 4 mm of exposed metal for use on industrial circuits
- E. Retractable long reach alligator clips
- F. Magnetic hanger to position and hold meter to steel surfaces
- G. Temperature probe

\*Savings are noted in US\$

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