

TECHNICAL DATA

Fluke 87V IMSK Industrial Multimeter Service Kit



87V IMSK KIT HIGHLIGHTS

- Fluke-87V Multimeter has true-rms accuracy and advanced functionality to give you the results you need
- Fluke-i400 AC 400A Current Clamp turns the 87V into a clamp meter
- Select accessories like temperature probe, test leads and alligator clips included

Product overview

This combo kit is built around the Fluke 87V, the most widely used industrial digital multimeter in the world, combined with the i400 AC current clamp. Together they provide the resolution and accuracy to efficiently troubleshoot any electrical system. The kit includes special accessories to make you even more productive on the job and will save over 15% compared with the individually priced items. Plus, you'll be working with the most trusted tools in the world.

Fluke-87V Multimeter has true-rms accuracy and advanced functionality to give you the results you need

- True-rms accuracy with manual and automatic ranging, Display Hold, Auto Hold, and Min/Max-Average recording
- Efficiently troubleshoot motor drives, plant automation, power distribution, and electromechanical equipment even in loud, high-energy, and high-altitude locations
- A low pass filter supports accurate frequency measurements on VFDs and captures intermittents as fast 250 μ S
- Lifetime warranty, backed by a brand you trust

Fluke-i400 AC 400A Current Clamp turns the 87V into a clamp meter

- The current clamp provides accurate current measurements up to 400 A ac without breaking electric circuits
- Allows taking measurements safely with industry standard safety ratings

Select accessories like temperature probe, test leads and alligator clips

- The 80BK-A DMM Temperature Probe plugs into the 87V's voltage jacks and allows temperature measurements from -40 °C to 260 °C (-40 °F to 500 °F)
- TL75 Test Leads and AC175 Alligator Clips complete this versatile kit

Key safety features

- Safety rated CAT III 1000 V, CAT IV 600 V meter to get you home safely from the job.
- Designed to withstand spikes of more than 8000 V. Audible Input Alert warning against wrong use of input jacks.

87V IMSK Specifications

87V Industrial Digital Multimeter

| Electrical specifications | | |
|---------------------------|--|---|
| DC voltage | Range | 0.1 mV to 1000 V |
| | Accuracy | $\pm(0.05\% + 1)$ |
| | Maximum resolution | 10 μ V |
| AC voltage | Range | 0.1 mV to 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 |
| DC current | Range | 0.1 μ A to 10 A (20 A for 30 seconds maximum) |
| | Amps Accuracy | $\pm(0.2\% + 2)$ |
| | Maximum resolution | 0.01 μ A |
| AC current | Range | 0.1 μ A to 10 A (20 A for 30 seconds maximum) |
| | Amps Accuracy | $\pm(1.0\% + 2)$ True-rms |
| | Maximum resolution | 0.1 μ A |
| Resistance | Range | 0.1 Ω to 50 M Ω |
| | Accuracy | $\pm(0.2\% + 1)$ |
| | Maximum resolution | 0.1 Ω |
| Capacitance | Range | 1 nF to 9999 μ 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 | Maximum duty cycle | 99.9 % |
| | Accuracy | $\pm(0.2\% \text{ per kHz} + 0.1\%)$ |
| | Maximum resolution | 0.1 % |
| Temperature measurement | -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 | $\pm(1.0\% + 10)$ |
| | Maximum resolution | 0.01 nS |
| Diode | Range | 3 V |
| | Resolution | 1 mV |
| | Accuracy | $\pm(2\% + 1)$ |
| Duty cycle range | Accuracy | Within $\pm(0.2\% \text{ per kHz} + 0.1\%)$ |
| Data storage | Peak transient capture | 250 μ S |
| | Min/Max/Avg | Yes |
| | Reading hold | Yes |

| | | |
|--|---|--|
| Display | Digital Analog bar graph Backlight Frequency | 6000 counts updates 4/sec. 19,999 counts in high-resolution mode 32 segments, updates 40/sec Yes 19,999 counts, updates 3/sec at > 10 Hz |
| Low pass filter | Measurement of VFDs: Yes | |
| Safety specifications | | |
| Compliance | CAT IV 600 V , CAT III 1000 V | |
| Overvoltage category | EN 61010-1 to 1000 V CAT III, 600V CAT IV | |
| Agency approvals | CE, CSA | |
| Mechanical and general specifications | | |
| IP rating | 30 | |
| Shock | 1 meter drop per | |
| Vibration | Per MIL-PRF-28800 for a Class 2 instrument | |
| Power | Three AA batteries | 400 hours typical, without backlight |
| Size | 201 x 98 x 52 mm (with holster) | |
| Weight | 355 g 624 g (with holster) | |
| Warranty | Limited lifetime | |
| 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) 0% – 70% (35 °C – 55 °C) | |
| Operating altitude | 2000 m | |



Fluke i400 Specifications

i400 AC Current Clamp

Specifications

| | |
|---------------------------------|--------------------------|
| Nominal current range | 400 A |
| Continuous current range | 1 A - 400 A |
| Maximum non-destructive current | 1000 A |
| Lowest measurable current | 1 A |
| Basic accuracy | 2 % + 0.06 A |
| | (45-400 Hz) |
| | (% reading + floor spec) |
| Useable frequency | 5 Hz - 20 kHz |
| Output level(s) | 1 mA/A |

Safety specifications

| | |
|-----------------|--|
| Safety | CAT IV 600 V, CAT III, 1000 V |
| Maximum voltage | 1000 V AC rms from earth to ground, in compliance with EN61010 |

Mechanical and general specifications

| | |
|---------------------------------|-----------------|
| Warranty | 1 year |
| Maximum conductor diameter | 32 mm (1.25 in) |
| Maximum conductor size (busbar) | 750 MCM |
| Output cable length | 1.5 m (59 in) |
| Shrouded banana plugs | Yes |

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Ordering information

Fluke 87V IMSK Industrial Multimeter Service Kit

Included

Fluke 87V Industrial Multimeter, Fluke i400 400 A AC Current Clamp, 80BK-A DMM Temperature Probe, TL75 Hard Point Test Lead Set, AC175 Threaded Alligator Clip Set