TECHNICAL DATA

Fluke 87V Industrial Multimeter plus insulated hand tools starter kit



Key features

- 87V: Identify complex signal problems fast
- 87V: measure current, voltage and frequency on complex variables
- Insulated tools: certified to 1000 V AC, 1500 V DC
- Insulated tools: ergonomic 8 piece set, with roll-up pouch

Product overview: Fluke 87V Industrial Multimeter plus insulated hand tools starter kit

The Fluke 87V Industrial Multimeter combined with the insulated hand tools starter kit, the most often used screwdrivers, pliers and cutters.

The 87V provides the resolution and accuracy to 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 µS.

The insulated hand tools starter kit has three sizes of slot screwdrivers. #1 and #2 Phillips screwdrivers. Long nose pliers, heavy duty diagonal cutters and heavy duty lineman combination pliers. All made from hardened chromium-molybdenum-vanadium (CMV) steel. All certified to 1000 volts AC and 1500V DC. All with a limited lifetime warranty.

Fluke 87V Industrial Multimeter

- Rugged, high accuracy industrial multimeter to measure current, voltage and frequency on complex variable frequency drive (VFD) signals
- Offers true-RMS AC voltage and current for measuring non-linear signals
- Captures intermittents as short as 250 µS
- Safety rated CAT III 1000 V, CAT IV 600 V
- Includes a built-in thermometer and temperature probe

Slotted screwdrivers

- Three different bladeforms
- Three handle lengths

Phillips screwdrivers

- #1 and #2 tips
- Two handle lengths

Long nose pliers with side cutter and gripping zones

- Unique milled wave pattern gripping zones
- 4 gripping points for pulling round objects with superior grip that won't slip
- Straight, half-round, long and slim knurled jaws, specially profiled
- Side cutting edge for wire cutting

Heavy duty, high leverage diagonal cutter

- Cuts hard materials including steel and piano wire
- Power joint and precision cutting edges

Heavy Duty Combination Pliers

- Secure hold by aggressive serrated jaws and 4-point gripping hole
- Slim shape for better access to wires in tight spaces
- Powerful gripping jaw, yet 20% lighter weight than other designs

Specifications: Fluke 87V Industrial Multimeter plus insulated hand tools starter kit

87V Industrial Multimeter Specifications:

Voltage DC	Maximum voltage	1000 V
	Accuracy	±(0.05% + 1)
	Maximum resolution	10 µV
Voltage AC	Maximum voltage	1000 V
	Accuracy	±(0.7% + 2) True RMS
	AC bandwidth	20 kHz with low pass filter; 3 db @ 1 kHz
	Maximum resolution	0.1 mV

Current DC	Maximum amps	10 A (20 A for 30 seconds maximum)
	Amps accuracy	±(0.2% + 2)
	Maximum resolution	0.01 µA
Current AC	Maximum amps	10 A (20 A for 30 seconds maximum)
	Amps accuracy	±(1.0% + 2) True RMS
	Maximum resolution	0.1 µA
Resistance	Maximum resistance	50 MΩ
	Accuracy	±(0.2% + 1)
	Maximum resolution	0.1 Ω
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	–200.0 °C – 1090 °C	
80 BK	–40.0 °C – 260 °C	
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 ±(0.2% per kHz + 0.1%)
Environmental Specifications		
Operating	–20 °C to + 55 °C	
Storage	–40 °C to + 60 °C	
Humidity	0% – 90% (0 °C – 35 °C)	
Operating	2000 m	
Safety Specifications		
Overvoltage	EN 61010–1 to 1000 V CAT III, 600V CAT IV	
Agency	UL, CSA, TÜV, VDE listed	

Mechanical and General Specifications		
Size	201 x 98 x 52 mm (with holster)	
Weight	355 g	
Display	Digital	6000 counts updates 4/sec.
	Analog	32 segments, updates 40/sec
	Frequency	19,999 counts, updates 3/sec at > 10 Hz
Warranty	Lifetime	
Battery Life	Alkaline	~400 hours typical, without backlight
Shock	1 Meter drop per IEC 61010–1:2001	
Vibration	Per MIL–PRF–28800 for a Class 2 instrument	

Screwdriver Type	Blade length (inches *mm*)	Handle length (inches *mm*)	Handle width (inches *mm*)	Bladeform diameter (inches *mm*)
Slot	3 *75*	3-3/8 *86*	1 *25*	3/32 *2.55*
Slot	4 *100*	3-11/16 *94*	1 5/16 *30*	5/32 *4.0*
Slot	5 *125*	4-3/16 *106*	1 7/16 *36*	1/4 *6.0*
Phillips #1	3 *80*	3-11/16 *94*	1 3/16 *30*	7/32 *5*
Phillips #2	4 *100*	4-3/16 *106*	1 7/16 *36*	1/4 *6*

Pliers Type	Nominal Length (inches)	Nominal Length (mm)
Long Nose	8	200
Diagonal Cutters	8	200
Lineman Combination Pliers	8	200

Warranty

Fluke Insulated Hand Tool Lifetime Limited Warranty

Each Fluke Insulated Hand Tool will be free from defects in material and workmanship for its lifetime. As used herein, “lifetime” is defined as seven years after Fluke discontinues manufacturing the product, but the warranty period shall be at least fifteen years from the date of purchase. This warranty does not cover damage from neglect, misuse, contamination, alteration, accident or abnormal conditions of operation or handling, damage or normal wear and tear of mechanical components. This warranty covers the original purchaser only and is not transferable.

Recommendations for use and in-service care of Fluke Insulated Hand Tools

The following is guidance concerning the maintenance, inspection, retest and use of Fluke Insulated Hand Tools.

Warning – to avoid electrical shock or personal injury:

- Keep fingers behind the finger guards of the tool. Never touch conductive parts.

- Always wear approved eye protection.
- Do not use in wet or damp locations. Do not use unless the tool is clean and dry.
- Do not apply excessive force or stress to the tool insulation that may cause damage. Examples include using the insulated surfaces as a fulcrum to pry or wedge or gripping insulated tool handles with other tools such as pliers or wrenches to increase torque or leverage.

If the tool is used in a manner not specified, the protection may be impaired.

Storage

Insulated hand tools should be properly stored to minimize the risk of damage to the insulation due to storage or transportation. These insulated hand tools should be stored separated from other tools to avoid mechanical damage or confusion with uninsulated tools. Furthermore, these insulated hand tools should be prevented from contact with excessively hot surfaces (for example steam pipes) or exposure to excessive UV- radiation.

Inspection before use

Before use, each Insulated Hand Tool should be visually inspected by the user. If there is any doubt concerning the safety of the insulated hand tool, it should be subjected to examination by a competent person and if necessary retested to determine suitability or disposed of to prevent further use.

Temperature

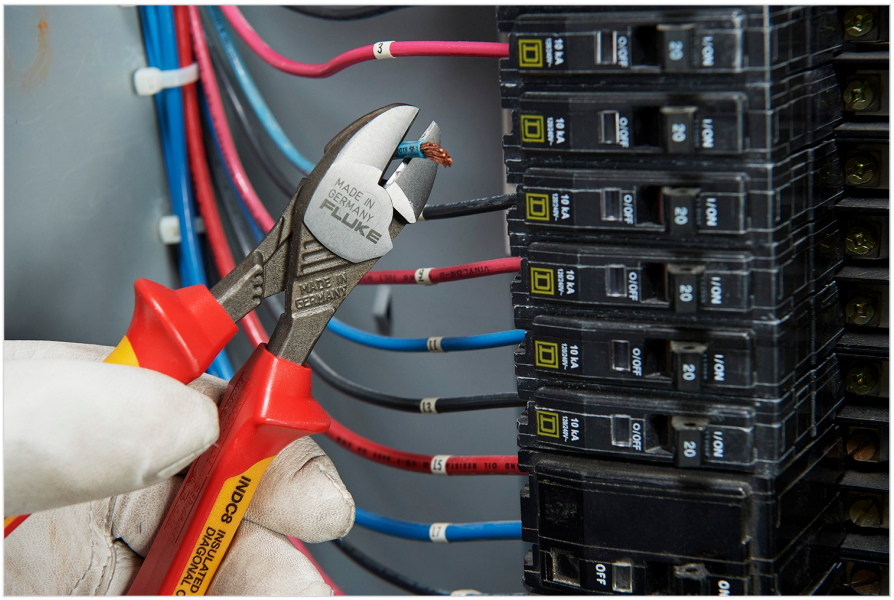
Insulated Hand Tools should be used only in environments having temperatures between –20 °C and +70 °C and, for tools marked “C”, between –40 °C and +70 °C.

Periodic examination and electrical retesting

An annual visual examination by a suitably trained person is recommended to determine the suitability of the Insulated Hand Tool for further service. If an electrical retest is required by national regulation or in the case of doubt after visual examination, the applicable dielectric test of IEC 60900 for insulated hand tools should be performed.

For details contact a Fluke Service Center.

Ordering information



IB875K

87V Industrial Multimeter + Insulated Hand Tools Starter Kit (5 insulated screwdrivers and 3 insulated pliers)

Includes:

- Fluke 87V Industrial Multimeter
- ISLS3 Insulated Slotted Screwdriver 3/32, 3"
- ISLS5 Insulated Slotted Screwdriver 5/32, 4"
- ISLS8 Insulated Slotted Screwdriver 1/4, 5"
- IPHS1 Insulated Phillips Screwdriver #1, 3"
- IPHS2 Insulated Phillips Screwdriver #2, 4"
- INLP8 Insulated Long Nose /w Side Cutter and Gripping Zones
- INDC8 Insulated Heavy Duty High Leverage Diagonal Cutter
- INCP8 Insulated Heavy Duty Linesman Combination Plier
- RUP8 Roll up pouch



Preventive maintenance simplified. Rework eliminated.

Save time and improve the reliability of your maintenance data by wirelessly syncing measurements using the Fluke Connect® system.

- Eliminate data-entry errors by saving measurements directly from the tool and associating them with the work order, report or asset record.
- Maximize uptime and make confident maintenance decisions with data you can trust and trace.
- Access baseline, historical and current measurements by asset.
- Move away from clipboards, notebooks and multiple spreadsheets with a wireless one-step measurement transfer.
- Share your measurement data using ShareLive™ video calls and emails.

Find out more at **flukeconnect.com**

Download on the App Store

ANDROID APP ON Google play



All trademarks are the property of their respective owners. WiFi or cellular service required to share data. Smartphone, wireless service and data plan not included with purchase. First 5 GB of storage is free. Phone support details can be viewed at **fluke.com/phones**.

Smart phone wireless service and data plan not included with purchase. Fluke Connect is not available in all countries.

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

©2024 Fluke Corporation.
Specifications subject to change without notice.
10/2024

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