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Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

FLUKE

Fluke 87V-NIST True RMS Industrial Multimeter with temperature

The Fluke 87V-NIST True RMS Industrial Multimeter with temperature is a versatile tool for troubleshooting and diagnostics in industrial settings. It accurately measures AC and DC voltage, current, resistance, frequency, and temperature. The multimeter features a large, backlit display for easy reading in any environment, and its rugged design ensures reliable performance even in harsh conditions. Includes NIST-traceable calibration certificate.



MODEL

Fluke 87V-NIST

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

87V-NIST

LISTING

<https://aumictechlabs.com/products/87v-nist-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Fluke 87V-NIST is a True RMS industrial multimeter engineered for electrical diagnostics in demanding environments. It measures DC/AC voltage to 1000 V, DC/AC current to 10 A (20 A/30 sec), resistance to 50 MΩ, capacitance to 9999 μF, frequency to 200 kHz, and temperature to 1090°C. A NIST-traceable calibration certificate and full uncertainty data ship with every unit.

Technical Specifications

Voltage Measurement DC: 1000 V max, $\pm(0.05\% + 1)$ accuracy, 10 μV resolution AC True RMS: 1000 V max, $\pm(0.7\% + 2)$ accuracy, 0.1 mV resolution, 20 kHz bandwidth with low-pass filter

Current Measurement DC: 10 A max (20 A/30 sec), $\pm(0.2\% + 2)$ accuracy, 0.01 μA resolution AC True RMS: 10 A max (20 A/30 sec), $\pm(1.0\% + 2)$ accuracy, 0.1 μA resolution

Resistance, Capacitance, Frequency Resistance: 50 M Ω max, $\pm(0.2\% + 1)$ accuracy, 0.1 Ω resolution Capacitance: 9999 μ F max, $\pm(1\% + 2)$ accuracy, 0.01 nF resolution Frequency: 200 kHz max, $\pm(0.005\% + 1)$ accuracy, 0.01 Hz resolution Temperature Display range: -200 to 1090°C (-328 to 1994°F) With 80 BK probe: -40 to 260°C (-40 to 500°F) Accuracy: 1.0% Physical & Safety Display: 6000 counts (3-3/4 digit) or 20,000 counts (4-1/2 digit) with two-level backlight Safety: CAT III 1000 V / CAT IV 600 V Impulse withstand: >8000 V Operating temp: -20 to 55°C Dimensions: 201 × 98 × 52 mm; Weight: 355 g Key Features Adjustable speed motor drive function with low-pass filter for noise rejection on electrically noisy equipment Peak Min/Max capture detects glitches and spikes as short as 250 μ s NIST-traceable calibration with full data and uncertainties Typical Applications Motor drives, plant automation, power distribution, and electromechanical equipment troubleshooting.

Features & description

From manufacturer datasheet

Built-in thermometer with Type-K support

Min/Max/Average and Peak Min/Max to 250 us 6000-count display with HiRes 19999 mode Technical Specifications DC Voltage Maximum: 1000 V DC Voltage Accuracy: plus or minus (0.05 percent plus 1) DC Voltage Maximum Resolution: 10 uV AC Voltage Maximum: 1000 V AC Voltage Accuracy: plus or minus (0.7 percent plus 2) True RMS AC Bandwidth With Low Pass Filter: 20 kHz; 3 dB at 1 kHz DC Current Maximum: 10 A (20 A for 30 seconds maximum) DC Current Accuracy: plus or minus (0.2 percent plus 2) AC Current Maximum: 10 A (20 A for 30 seconds maximum) AC Current Accuracy: plus or minus (1.0 percent plus 2) True RMS Resistance Maximum: 50 Mohm Resistance Accuracy: plus or minus (0.2 percent plus 1) Capacitance Maximum: 9999 uF Capacitance Accuracy: plus or minus (1 percent plus 2) Frequency Maximum: 200 kHz Frequency Accuracy: plus or minus (0.005 percent plus 1) Duty Cycle Maximum: 99.9 percent Temperature Measurement Range: minus 200.0 C to 1090 C excluding probe Conductance Maximum: 60.00 nS Diode Test Range: 3 V Overvoltage Category: CAT III 1000 V CAT IV 600 V Size With Holster: 201 × 98 × 52 mm Weight: 355 g; 624 g with holster Display Counts: 6000 digital; HiRes 19999 counts Battery Life Typical: 400 hours alkaline backlight off

87VNIST Characteristics / Specifications

PARAMETER	VALUE
DC Voltage Maximum	1000 V
DC Voltage Accuracy	plus or minus (0.05 percent plus 1)
DC Voltage Maximum Resolution	10 uV
AC Voltage Maximum	1000 V
AC Voltage Accuracy	plus or minus (0.7 percent plus 2) True RMS
AC Bandwidth With Low Pass Filter	20 kHz; 3 dB at 1 kHz
DC Current Maximum	10 A (20 A for 30 seconds maximum)
DC Current Accuracy	plus or minus (0.2 percent plus 2)
AC Current Maximum	10 A (20 A for 30 seconds maximum)
AC Current Accuracy	plus or minus (1.0 percent plus 2) True RMS
Resistance Maximum	50 Mohm
Resistance Accuracy	plus or minus (0.2 percent plus 1)
Capacitance Maximum	9999 uF
Capacitance Accuracy	plus or minus (1 percent plus 2)
Frequency Maximum	200 kHz
Frequency Accuracy	plus or minus (0.005 percent plus 1)
Duty Cycle Maximum	99.9 percent
Temperature Measurement Range	minus 200.0 C to 1090 C excluding probe
Conductance Maximum	60.00 nS
Diode Test Range	3 V
Overvoltage Category	CAT III 1000 V CAT IV 600 V
Size With Holster	201 × 98 × 52 mm
Weight	355 g; 624 g with holster
Display Counts	6000 digital; HiRes 19999 counts
Battery Life Typical	400 hours alkaline backlight off

PARAMETER	VALUE
Alias Of	fluke-87-5
Bandwidth	With Low Pass Filter: 20 kHz; 3 dB at 1 kHz

87VNIST Specifications

PARAMETER	VALUE
Fluke 87V NIST True RMS Industrial Digital Multimeter	Overview
Min/Max/Average and Peak Min/Max to 250 us	6000-count display with HiRes 19999 mode
Technical Specifications	DC Voltage Maximum: 1000 V

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

specifications list DC voltage accuracy plus or minus (0.05 percent plus 1), AC true-RMS to 1000 V, current to 10 A, resistance to 50 Mohm, frequency to 200 kHz, VFD low-pass filter, and CAT III 1000 V / CAT IV 600 V.

Applications

Industrial electrical calibration documentation with NIST-traceable certificates, VFD and motor-drive measurements, and temperature checks with Type-K probe.

Key Features

True-RMS AC voltage and current

Selectable low-pass filter for VFD measurements

Built-in thermometer with Type-K support

Min/Max/Average and Peak Min/Max to 250 us

6000-count display with HiRes 19999 mode

Technical Specifications

Technical Specifications

PARAMETER	VALUE
DC Voltage Maximum	1000 V
DC Voltage Accuracy	plus or minus (0.05 percent plus 1)
DC Voltage Maximum Resolution	10 uV
AC Voltage Maximum	1000 V
AC Voltage Accuracy	plus or minus (0.7 percent plus 2) True RMS
AC Bandwidth With Low Pass Filter	20 kHz; 3 dB at 1 kHz
DC Current Maximum	10 A (20 A for 30 seconds maximum)
DC Current Accuracy	plus or minus (0.2 percent plus 2)
AC Current Maximum	10 A (20 A for 30 seconds maximum)
AC Current Accuracy	plus or minus (1.0 percent plus 2) True RMS
Resistance Maximum	50 Mohm
Resistance Accuracy	plus or minus (0.2 percent plus 1)
Capacitance Maximum	9999 uF
Capacitance Accuracy	plus or minus (1 percent plus 2)
Frequency Maximum	200 kHz
Frequency Accuracy	plus or minus (0.005 percent plus 1)
Duty Cycle Maximum	99.9 percent
Temperature Measurement Range	minus 200.0 C to 1090 C excluding probe
Conductance Maximum	60.00 nS
Diode Test Range	3 V

PARAMETER	VALUE
Overvoltage Category	CAT III 1000 V CAT IV 600 V
Size With Holster	201 x 98 x 52 mm
Weight	355 g; 624 g with holster
Display Counts	6000 digital; HiRes 19999 counts
Battery Life Typical	400 hours alkaline backlight off
Alias Of	fluke-87-5

Notes

Alias of fluke-87-5 / 87V shared numeric table from Fluke 87V datasheets for NIST-traceable documentation workflows; confirm NIST certificate number and sticker on the unit.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.