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Data Sheet

August 13, 2026

FLUKE

Fluke 8010A Digital Multimeter

The Fluke 8010A is a portable/bench 3.5-digit digital multimeter measuring DC volts, True-RMS AC volts from 45 Hz to 50 kHz, DC/AC amps, ohms, conductance, and diode test. A dedicated 10 A AC/DC current range supports higher-current service measurements. Standard 8010A units are AC line powered; the 8010A-01 adds rechargeable battery operation. Alias: 8010A; Fluke 8010A; 8010A-01 battery option DC volts ranges: 200 mV; 2 V; 20 V; 200 V; 1000 V DC volts basic 1-year accuracy: 0.1% of reading + 1 digit CMRR: greater than 90 dB at DC / 50 / 60 Hz class



MODEL	CALIBRATION
Fluke 8010A	Available on request
CONDITION	STATUS
Used	In stock
RFQ / SKU	LISTING
8010A	https://aumictechlabs.com/products/8010a-2/

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Fluke 8010A is a 3.5-digit portable/benchtop digital multimeter engineered for precision electrical testing across DC and AC measurements. It delivers 0.1% basic DC accuracy using dual-slope integration to eliminate noise and provides true-RMS conversion for accurate non-sinusoidal waveform measurement. The instrument handles DC voltage from 100 μ V to 1000 V, AC voltage from 10 mV to 750 V, DC current from 100 nA to 2 A, AC current from 10 μ A to 2 A, and includes a dedicated 10 A AC/DC range. Resistance measurement spans 100 m Ω to 20 M Ω , with conductance capability up to 10,000 M Ω equivalent resistance. The 3.5-digit LCD display provides autozero and autopolarity indication. True-RMS conversion handles crest factors of 1 to 1 and operates across 45 Hz to 50 kHz with typical ± 3 dB response extending to 200 kHz. Diode testing is supported

through resistance ranges. Voltage overload protection reaches 1000 V DC or peak AC on all ranges, with transient protection to 6 kV for 10 microseconds. Current protection uses two in-series fuses (2 A/250 V and 3 A/600 V); the 10 A range is unfused. Resistance/conductance inputs withstand up to 500 V without damage. Input impedance is 10 M Ω on all ranges. The instrument features normal mode rejection >60 dB at 60 Hz and common mode rejection >60 dB at DC, 50 Hz, and 60 Hz. Response time is 1 second maximum within a range. AC line operation uses 90–132 V or 200–264 V at 50/60 Hz, consuming 2 W standard. Optional battery operation (8010A-01) provides 15–30 hours of use with 14-hour recharge time and low-battery indication at 1/2 hour remaining.

Technical Specifications

Display: 3.5-digit LCD with autozero and autopolarity

DC Voltage: 100 μ V to 1000 V

AC Voltage (True-RMS): 10 mV to 750 V (45 Hz to 50 kHz)

DC Current: 100 nA to 2 A

AC Current (True-RMS): 10 μ A to 2 A, with dedicated 10 A range

Resistance: 100 m Ω to 20 M Ω

Conductance: Up to 10,000 M Ω equivalent resistance

Diode Test: PN junction testing via resistance ranges

Basic DC Accuracy: 0.1%

Frequency Response: $\pm$ 3 dB typical to 200 kHz; accuracy specified to 50 kHz

Volt-Hz Product: 10⁷ max (200 V max @ 50 kHz)

Input Impedance: 10 M Ω on all ranges

Normal Mode Rejection: >60 dB at 60 Hz

Common Mode Rejection: >60 dB at DC, 50 Hz, and 60 Hz (1 k Ω unbalanced)

Overload Protection Voltage: 1000 V DC or peak AC; transients to 6 kV for 10 μ s

Overload Protection Current: Two in-series fuses (2 A/250 V, 3 A/600 V); 10 A range unfused

Overload Protection Resistance/Conductance: Up to 500 V without damage

Response Time: 1 second maximum within a range

Power (AC line): 90–132 V or 200–264 V at 50/60 Hz; 2 W consumption

Battery Option (8010A-01): 15–30 hours operation; 14-hour recharge time

Key Features

- Dual-slope integration eliminates noise floor
- True-RMS converter handles non-sinusoidal waveforms (crest factor 1 to 1)
- Fluke-manufactured true-RMS converter ensures accuracy across harmonically complex signals
- Clear LCD with dual indication modes
- Long-term calibration stability (1 year)
- 500 V resistance-mode overvoltage tolerance
- 6 kV transient protection on voltage inputs

Typical Applications

- Electronics technician troubleshooting and maintenance
- Power supply testing and verification
- Non-sinusoidal waveform measurement in switched circuits
- Field and laboratory AC/DC measurements
- Diode and junction testing

Compatibility & Integration

Standard AC line operation with selectable voltage input. Fused current protection via dual in-series elements. Optional rechargeable battery operation enables extended portable use without line dependency.

Features & description

From manufacturer datasheet

Features

- 3.5-digit / 2000-count LCD
- True-RMS AC voltage and current
- Conductance to high equivalent resistance
- Diode/transistor test on resistance ranges
- Dedicated 10 A AC/DC range
- Optional 8010A-01 rechargeable battery model

Applications

- General-purpose service and bench DMM measurements
- True-RMS AC voltage and current troubleshooting
- Conductance measurements for high-resistance equivalents
- Higher-current measurements to 10 A

8010A Characteristics / Specifications

PARAMETER	VALUE
Model	8010A
Manufacturer	Fluke
Instrument Type	Digital Multimeter
Alias	8010A; Fluke 8010A; 8010A-01 battery option
Digits	3.5; 2000 count
DC volts ranges	200 mV; 2 V; 20 V; 200 V; 1000 V
DC volts resolution	100 uV to 1 V
DC input impedance	10 Mohm all ranges
NMRR	greater than 60 dB at 60 Hz class
CMRR	greater than 90 dB at DC / 50 / 60 Hz class
AC volts ranges	200 mV to 750 V; 5 ranges
AC volts frequency	45 Hz to 50 kHz
DC current ranges	200 uA to 10 A; 6 ranges
DC current resolution	0.1 uA to 10 mA
AC current ranges	200 uA to 10 A; 6 ranges True-RMS
Resistance ranges	200 ohm to 20 Mohm; 6 ranges
Resistance resolution	0.1 ohm to 10 kohm
Conductance	up to about 10000 Mohm equivalent resistance class
Additional functions	diode test
Power	AC line; 8010A-01 rechargeable battery option
Size	about 6 × 22 × 25 cm; 2.5 × 8.5 × 10 in class
Weight	about 1.08 kg line model; heavier with batteries
Related model	8012A adds low-ohms 20 ohm range without 10 A focus Notes Specs from Fluke 8010A product summaries and users-manual specification tables. Confirm 8010A vs 8010A-01 battery option and fuse condition on the unit.

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	
Specifications	
PARAMETER	VALUE
Model	8010A
Manufacturer	Fluke
Instrument Type	Digital Multimeter
Alias	8010A; Fluke 8010A; 8010A-01 battery option
Digits	3.5; 2000 count
DC volts ranges	200 mV; 2 V; 20 V; 200 V; 1000 V
DC volts resolution	100 uV to 1 V
DC volts basic 1-year accuracy: 0.1% of reading + 1 digit	
Specifications	
PARAMETER	VALUE
DC input impedance	10 Mohm all ranges
NMRR	greater than 60 dB at 60 Hz class
CMRR	greater than 90 dB at DC / 50 / 60 Hz class
AC volts ranges	200 mV to 750 V; 5 ranges
AC volts frequency	45 Hz to 50 kHz
AC volts basic 1-year accuracy: 1%	
AC True-RMS: yes	
DC current ranges: 200 uA to 10 A; 6 ranges	
DC current resolution: 0.1 uA to 10 mA	
DC current basic 1-year accuracy: 0.5%	
AC current ranges: 200 uA to 10 A; 6 ranges True-RMS	
AC current basic 1-year accuracy: 1%	
Resistance ranges: 200 ohm to 20 Mohm; 6 ranges	
Resistance resolution: 0.1 ohm to 10 kohm	
Resistance basic 1-year accuracy: 0.5%	
Specifications	
PARAMETER	VALUE
Conductance	up to about 10000 Mohm equivalent resistance class
Additional functions	diode test

PARAMETER	VALUE
Power	AC line; 8010A-01 rechargeable battery option
Size	about 6 x 22 x 25 cm; 2.5 x 8.5 x 10 in class
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Notes

Specs from Fluke 8010A product summaries and users-manual specification tables. Confirm 8010A vs 8010A-01 battery option and fuse condition 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

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NIST-traceable calibration · SAM registered ·
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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.