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Data Sheet

August 14, 2026

FLUKE

Fluke 8502AT Digital Multimeter

Fluke 8502AT 6.5 Digit System Digital Multimeter Alias The Fluke 8502AT designation is treated as a documentation alias of the Fluke 8502A 6.5-digit system digital multimeter for optioned or variant labeling. Shared 8502A manual specifications cover DC volts in five ranges from 100 mV to 1000 V, modular AC ohms and current options, recirculating-remainder A/D, and mass about 9.1 kg basic / 10.92 kg fully loaded. Same as 8502A automated DC voltage and ratio measurements where the unit label includes an AT suffix. The Fluke 8502AT designation is treated as a documentation alias of the Fluke 8502A 6.5-digit system digital multimeter for optioned or variant labeling. Shared 8502A manual specifications cover DC volts in five ranges from 100 mV to 1000 V, modular AC ohms and current options, recirculating-remainder A/D, and mass about 9.1 kg basic / 10.92 kg fully loaded. Same as 8502A automated DC voltage and ratio measurements where the unit label includes an AT suffix. 6.5 digit microprocessor-controlled DMM core of 8502A



MODEL

Fluke 8502AT

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

8502AT

LISTING

<https://aumictechlabs.com/products/8502at-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Fluke 8502AT is a 6.5-digit digital multimeter engineered for precision DC and AC measurements in laboratory and field environments. It delivers 500 readings per second with 6 PPM DC voltage accuracy and 212% overrange capability, making it suitable for demanding measurement applications. Microprocessor control and optional IEEE-488-1975 interface enable

remote programming and automated test integration. Modular construction accommodates optional converters for AC voltage, resistance, and true RMS measurement without mainframe replacement. Technical Specifications Resolution: 6.5 digits DC Voltage Accuracy: 6 PPM Overrange Capability: Up to 212% System Speed: 500 readings per second Measurement Ranges: DC Voltage: 5 ranges (standard) AC Voltage: 4 ranges (with optional AC converter) Resistance: 8 ranges (with optional Ohms Converter -02) Current: 5 ranges Thermal True RMS Converter (optional module): AC accuracy: Up to 0.015% across eight ranges Response time: Maximum 6 seconds Three front-panel selectable modes: fast, fast enhanced, and high accuracy AC Line Frequency: 400 Hz $\pm 5\%$ (8502AT model) Operating Power: 12 watts basic; 24 watts fully loaded at 50–60 Hz Warm-up Time: 2 hours to rated accuracy Physical: 42.5 cm $\times$ 43.2 cm $\times$ 10.8 cm; 9.1 kg basic, 10.92 kg fully loaded Operating Temperature: 0°C to 50°C Storage Temperature: -40°C to 70°C Humidity: 80% RH (0–18°C); 75% RH (18–40°C); 60% RH (40–50°C) Key Features MIL-T-28800 Class 5 style E compliance for shock and vibration Modular plug-in architecture for option configuration Optional IEEE-488-1975 interface for system integration External trigger interface isolator available (-08A) Dual AC supply compatibility: 115 V or 230 V $\pm 10\%$ Typical Applications Precision DC measurements in metrology laboratories, AC signal characterization with optional true RMS converter, automated test systems via IEEE-488 interface, field service in demanding thermal environments. Compatibility & Integration Standard configuration includes mainframe with DC volts and DC ratio measurement. Optional modules: Ohms Converter (-02), IEEE-488-1975 Interface (-05), Interface Isolator (-08A). Remote interface supports memory programming and microprocessor-controlled operation.

8502AT Characteristics / Specifications

PARAMETER	VALUE
Base Model	Fluke 8502A
Display Digits Class	6.5
DC Voltage Ranges	100 mV 1 V 10 V 100 V 1000 V
DC Voltage Normal Resolution Class	5.5 digits
DC Input Impedance Low Ranges	greater than 10000 Mohm
DC Input Impedance 100 V And 1000 V	10 Mohm
Basic Instrument Power	12 W at 115/230 VAC plus or minus 10 percent 50-60 Hz
Fully Loaded Power	24 W
Basic Mass	9.1 kg
Fully Loaded Mass	10.92 kg
Guard To Chassis Maximum	1000 V
HI Sense To LO Sense Maximum	1000 V
A/D Technique	recirculating remainder R2
Form Factor	benchtop/system DMM
Alias Of	fluke-8502a
Operating Temperature Class	0 C to 50 C class
Specification Ambient Class	laboratory ambient unless OEM table states otherwise
Calibration Traceability Class	per OEM calibration certificate
Series Family	Fluke 8500A system DMM
Operating temperature	Class: 0 C to 50 C class

8502AT Specifications

PARAMETER	VALUE
Fluke 8502AT 6.5 Digit System Digital Multimeter Alias	Overview
Applications	Same as 8502A automated DC voltage and ratio measurements where the unit label includes an AT suffix.
Key Features	6.5 digit microprocessor-controlled DMM core of 8502A
Modular options for AC ohms current and interfaces	Recirculating remainder R2 A/D technique
Technical Specifications	Base Model: Fluke 8502A

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Class: 0 C to 50 C class
Operating Temperature	Class: 0 C to 50 C class
Operating Temperature Class	0 C to 50 C class
Specification Ambient Class	laboratory ambient unless OEM table states otherwise
Calibration Traceability Class	per OEM calibration certificate
Series Family	Fluke 8500A system DMM Notes Alias of fluke-8502a (8502AT). Shared numeric table from Fluke 8502A Operating/Service Manual; confirm what AT denotes on the specific unit option label and certificate.

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 cover DC volts in five ranges from 100 mV to 1000 V, modular AC ohms and current options, recirculating-remainder A/D, and mass about 9.1 kg basic / 10.92 kg fully loaded.

Applications
Same as 8502A automated DC voltage and ratio measurements where the unit label includes an AT suffix.

Key Features
6.5 digit microprocessor-controlled DMM core of 8502A
Modular options for AC ohms current and interfaces
Recirculating remainder R2 A/D technique
External reference and digital filtering
Front/rear input options

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Base Model	Fluke 8502A
Display Digits Class	6.5
DC Voltage Ranges	100 mV 1 V 10 V 100 V 1000 V
DC Voltage Normal Resolution Class	5.5 digits
DC Input Impedance Low Ranges	greater than 10000 Mohm

DC Input Impedance 100 V And 1000 V: 10 Mohm

Specifications

PARAMETER	VALUE
Basic Instrument Power	12 W at 115/230 VAC plus or minus 10 percent 50-60 Hz
Fully Loaded Power	24 W
Basic Mass	9.1 kg
Fully Loaded Mass	10.92 kg
Guard To Chassis Maximum	1000 V
HI Sense To LO Sense Maximum	1000 V

Option 01: AC/DC converter averaging
Option 02: ohms converter
Option 03: current shunts
Option 05: IEEE interface
Option 09A: AC/DC converter RMS

Specifications

PARAMETER	VALUE
A/D Technique	recirculating remainder R2
Form Factor	benchtop/system DMM
Alias Of	fluke-8502a
Operating Temperature Class	0 C to 50 C class
Specification Ambient Class	laboratory ambient unless OEM table states otherwise
Calibration Traceability Class	per OEM calibration certificate
Series Family	Fluke 8500A system DMM

Notes
Alias of fluke-8502a (8502AT). Shared numeric table from Fluke 8502A Operating/Service Manual; confirm what AT denotes on the specific unit option label and certificate.

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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NIST-traceable calibration · SAM registered ·
30-day returns
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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.