Aumictech
Test & measurement · bought, sold, repaired, calibrated

Data Sheet
August 13, 2026

KEITHLEY

Keithley 502A

The Fluke 5502A isamulti-product calibrator for low-to-medium accuracy electrical instrumentation such as 3.5- and 4.5-digit DMMs. It sources DC/AC voltage and current (multiple waveforms and harmonics), dual voltage or simultaneous V+I for DC/AC power with phase control, resistance, capacitance, thermocouples, and RTDs. It can measure thermocouples. Optional scope calibrator packages cover 300 MHz or 600 MHz. With a 52120A transconductance amplifier and coils, current can be extended for clamp workloads. Calibration temperature (tcal): 15 degC to 35 degC Oscilloscope option class: Levelled sine 5 mV to 5.5 Vpp; edge <300 ps class; to 300 MHz or 600 MHz per option Current boost (52120A): to 100 A dc / 120 A ac; up to 6000 A with coils Summary ranges from Fluke 5502A product literature and getting-started specs. Confirm installed scope option and exact 1-year uncertainty rows on the unit certificate.

MODEL Keithley 502A	CALIBRATION Available on request
CONDITION Used	STATUS In stock
RFQ / SKU 502A	LISTING https://aumictechlabs.com/products/502a-2/

NIST-traceable cal · SAM registered · 30-day returns · NAICS 423690 · 811210 · 541380

This unit

The Keithley 502A is a precision analog milliohmmeter engineered for accurate low-resistance measurements across laboratory and field environments. It delivers reliable readings without zero drift or thermal EMF errors, utilizing 13 overlapping ranges with linear scale indication for direct resistance value display. The instrument achieves 10 µΩ sensitivity and ±3% accuracy (±5% on the 1 mΩ range), making it well-suited for resistivity and contact resistance characterization.

Technical Specifications Resistance Ranges: 13 overlapping ranges Sensitivity: 10 µΩ Accuracy: ±3% of full scale (±5% on 1 mΩ range) Test Current: 10 mA (1 mΩ to 10 mΩ range); down to 600 µA (1 kΩ range) Power Dissipation: <2 mW Voltage Across Sample: 360 hours Design: Analog Key Features Zero drift immunity and thermal EMF rejection Linear scale across multiple overlapping ranges for unambiguous reading Low test voltage and current to minimize sample heating and potential damage Extended battery life supporting continuous field deployment Typical Applications Contact and bond resistance measurement Resistivity characterization Low-resistance verification in electrical assemblies Compatibility & Integration The 502A operates with battery types RM 401R, RM 42R, 412, and 413. Analog design allows direct integration into manual measurement workflows without external interfaces.

Features & description

From manufacturer datasheet

Features

• Multi-product DC/AC V, I, ohms, capacitance, TC/RTD • Simultaneous V+I / dual voltage power simulation with phase control • Optional 300 MHz or 600 MHz oscilloscope calibrator • RS-232 and IEEE-488 remote interfaces • Compatible with 52120A current boost and coils

Applications

• Calibration of handheld and benchtop DMMs • Multi-product electrical instrument calibration • Oscilloscope calibration with SC300/SC600-class options • Automated MET/CAL procedures

502A Characteristics / Specifications

PARAMETER	VALUE
Model	5502A
Manufacturer	Fluke
Instrument Type	Multi-Product Calibrator
Alias	5502A; Fluke 5502A
Direct voltage	0 to +/-1020 V
Direct current	0 to +/-20.5 A
Alternating voltage	1 mV to 1020 V; 10 Hz to 500 kHz
Voltxhertz	1000 V at 10 kHz; 330 V at 100 kHz
Alternating current	29 uA to 20.5 A; 10 Hz to 30 kHz
Waveforms	Sine, square, triangle, truncated sine
Resistance	0 ohm to 1100 Mohm
Capacitance	220 pF to 110 mF
Power (phantom loads)	20.9 kW
Phase control resolution	0.01 degree
Thermocouple source/measure	Types B, C, E, J, K, L, N, R, S, T, U; 10 uV/degC and 1 mV/degC linear modes
RTD source	Pt385-100, Pt3926-100, Pt3916-100, Pt385-200, Pt385-500, Pt385-1000, PtNi385-120 (Ni120), Cu427-10
Interfaces	RS-232, IEEE-488
Frequency uncertainty	<25 ppm
Operating temperature	0 degC to 50 degC
Calibration temperature (tcal)	15 degC to 35 degC
Oscilloscope option class	Levelled sine 5 mV to 5.5 Vpp; edge <300 ps class; to 300 MHz or 600 MHz per option
Current boost (52120A)	to 100 A dc / 120 A ac; up to 6000 A with coils Notes Summary ranges from Fluke 5502A product literature and getting-started specs. Confirm installed scope option and exact 1-year uncertainty rows on the unit certificate.

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 degC to 50 degC
Operating Temperature	0 degC to 50 degC
Calibration temperature (tcal)	15 degC to 35 degC
Oscilloscope option class	Levelled sine 5 mV to 5.5 Vpp; edge <300 ps class; to 300 MHz or 600 MHz per option
Current boost (52120A)	to 100 A dc / 120 A ac; up to 6000 A with coils Notes Summary ranges from Fluke 5502A product literature and getting-started specs. Confirm installed scope option and exact 1-year uncertainty rows on the unit 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

Specifications

PARAMETER	VALUE
Model	5502A
Manufacturer	Fluke
Instrument Type	Multi-Product Calibrator
Alias	5502A; Fluke 5502A

Specifications

PARAMETER	VALUE
Direct voltage	0 to +/-1020 V
Direct current	0 to +/-20.5 A
Alternating voltage	1 mV to 1020 V; 10 Hz to 500 kHz
Voltxhertz	1000 V at 10 kHz; 330 V at 100 kHz
Alternating current	29 uA to 20.5 A; 10 Hz to 30 kHz
Waveforms	Sine, square, triangle, truncated sine
Resistance	0 ohm to 1100 Mohm
Capacitance	220 pF to 110 mF
Power (phantom loads)	20.9 kW
Phase control resolution	0.01 degree
Thermocouple source/measure	Types B, C, E, J, K, L, N, R, S, T, U; 10 uV/degC and 1 mV/degC linear modes
RTD source	Pt385-100, Pt3926-100, Pt3916-100, Pt385-200, Pt385-500, Pt385-1000, PtNi385-120 (Ni120), Cu427-10
Interfaces	RS-232, IEEE-488
Frequency uncertainty	<25 ppm

DC V 1-year best class (0 to 3.299999 V): +/-(5 ppm of output + 5 uV) per Fluke GS tables

Specifications

PARAMETER	VALUE
Operating temperature	0 degC to 50 degC

PARAMETER	VALUE
Calibration temperature (tcal)	15 degC to 35 degC
Oscilloscope option class	Levelled sine 5 mV to 5.5 Vpp; edge <300 ps class; to 300 MHz or 600 MHz per option
Current boost (52120A)	to 100 A dc / 120 A ac; up to 6000 A with coils

Notes

Summary ranges from Fluke 5502A product literature and getting-started specs. Confirm installed scope option and exact 1-year uncertainty rows on the unit 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
788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
https://aumictechlabs.com

NIST-traceable calibration · SAM registered · 30-day returns
NAICS 423690 · 811210 · 541380
Generated August 13, 2026