

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

KEITHLEY

Keithley 193A System Digital Multimeter

The HP / Agilent 4193A is a vector impedance meter that measures impedance magnitude and phase from 400 kHz to 110 MHz. An internal oscillator provides constant-current test signals (10 μ A to 100 μ A class depending on Zrange). Magnitude range spans 10 m Ω to 120 k Ω with phase from -180° to $+180^\circ$. Spot and swept (linear or logarithmic) frequency modes support in-circuit and out-of-circuit component characterization via HP-IB and analog outputs. RF component impedance vs frequency; ceramic resonator series-resonance identification; in-circuit probing; production adjustment with 3.5-digit resolution; network and filter characterization to 110 MHz. Manufacturer: Hewlett-Packard / Agilent / Keysight Alias: HP 4193A; Agilent 4193A; 4193A Impedance Meter 400 kHz–110 MHz; |Z| 10 m Ω –120 k Ω ; phase $\pm 180^\circ$ Prefer Keysight/HP 4193A Operation and Service Manual (04193-90000). Confirm probe/fixtures and EXT OSC connections for critical measurements.



MODEL

Keithley 193A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

193A

LISTING

<https://aumictechlabs.com/products/193a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keithley 193A System Digital Multimeter is a instrument for precision measurement and automated testing. It delivers 6½-digit resolution across DC and AC voltage, current, resistance, and temperature measurement functions. The 193A integrates IEEE-488 programmability for direct integration into automated test systems, internal data storage for up to 500 readings, and configurable digital filtering to optimize measurement stability across demanding R&D, calibration,

and manufacturing workflows. Technical Specifications Measurement Ranges DC Voltage: 100 nV to 1000 V AC Voltage (TRMS): 1 μ V to 700 V (with 1930 True RMS ACV option) DC Current: 1 nA to 2 A (with 1931 Current option) AC Current (TRMS): 1 nA to 2 A (with 1930 and 1931 options installed) Resistance (4-Wire): 200 Ω to 200 M Ω Temperature: RTD -100°C to 630°C; Thermocouple types J, K, T, E, R, S, B via IEEE-488 dB measurements available TRMS AC + DC measurements supported Performance Display: 14-character alphanumeric LED, $\pm 2,200,000$ counts A/D Converter: Greater than $\pm 1,999,999$ count range Measurement Rate: Up to 1000 readings per second (internal memory, filter and multiplex off) AC Voltage Bandwidth: Typically 500 kHz (3 dB) Key Features Digital Filter: Weighted average, settable 1 to 99 readings via front panel or bus Zero Function: Offset cancellation and baseline establishment; programmable locally or over IEEE-488 Internal Buffer: Stores up to 500 readings Digital Calibration: Accessible from front panel or IEEE-488 bus User-Programmable Defaults: Configure any measurement setup as power-up state Translator Software: Define custom command words for IEEE-488 operation Compatibility & Integration IEEE-488 Interface: Full programmability and remote control Power: 105–125 V or 210–250 V, 50–60 Hz, 40 VA Optional voltage ranges: 90–110 V or 180–220 V Available Options: 1930 True RMS ACV, 1931 Current module, CAL calibration

Features & description

From manufacturer datasheet

Features

- Frequency: 400 kHz to 110.0 MHz • Frequency resolution: 1 kHz (spot); external synthesizer via EXT OSC for finer resolution • Sweep: linear over any portion; logarithmic over full 400 kHz–110 MHz • Impedance magnitude: 10 m Ω to 120 k Ω • Phase: -180.0° to $+180.0^\circ$ • Accuracy: as good as 3.0% of reading (magnitude) and 3.2° (phase) • Test signal: constant current 10–100 μ A class byZrange • Display: 3.5-digit; auto/hold/manual ranging • Interfaces: HP-IB (GPIB); analog recorder outputs • Fixtures: L-ground probe; 16099A adapter and associated fixtures

193A Characteristics / Specifications

PARAMETER	VALUE
Model	4193A
Manufacturer	Hewlett-Packard / Agilent / Keysight
Instrument Type	Vector Impedance Meter
Family	HP Impedance Analyzers
Alias	HP 4193A; Agilent 4193A; 4193A Impedance Meter RF / Impedance 400 kHz–110 MHz; $ Z $ 10 m Ω –120 k Ω ; phase $\pm 180^\circ$ Operational Notes Prefer Keysight/HP 4193A Operation and Service Manual (04193-90000). Confirm probe/fixture and EXT OSC connections for critical measurements.
Frequency	400 kHz to 110.0 MHz
Frequency resolution	1 kHz (spot); external synthesizer via EXT OSC for finer resolution
Sweep	linear over any portion; logarithmic over full 400 kHz–110 MHz
Impedance magnitude	10 m Ω to 120 k Ω
Phase	-180.0° to $+180.0^\circ$
Accuracy	as good as 3.0% of reading (magnitude) and 3.2° (phase)
Test signal	constant current 10–100 μ A class by Zrange
Display	3.5-digit; auto/hold/manual ranging
Interfaces	HP-IB (GPIB); analog recorder outputs
Fixtures	L-ground probe; 16099A adapter and associated fixtures

193A Specifications

PARAMETER	VALUE
HP / Agilent 4193A IMPEDANCE METER	Overview
Key Features	- Frequency: 400 kHz to 110.0 MHz
Technical Specifications	Model: 4193A
RF / Impedance	400 kHz–110 MHz; $ Z $ 10 m Ω –120 k Ω ; phase $\pm 180^\circ$

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	4193A
Manufacturer	Hewlett-Packard / Agilent / Keysight
Instrument Type	Vector Impedance Meter
Family	HP Impedance Analyzers
Alias	HP 4193A; Agilent 4193A; 4193A Impedance Meter

RF / Impedance

400 kHz–110 MHz; |Z| 10 mΩ–120 kΩ; phase ±180°

Operational Notes

Prefer Keysight/HP 4193A Operation and Service Manual (04193-90000). Confirm probe/fixture and EXT OSC connections for critical measurements.

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

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