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Data Sheet

August 13, 2026

AGILENT / HP / KEYSIGHT

Agilent HP Keysight 8901B Modulation Analyzer, 150 kHz to 1.3 GHz

Agilent HP 8901B Modulation Analyzer 150 kHz to 1300 MHz The HP/Agilent 8901B is a fully automatic GPIB-programmable modulation analyzer combining RF power meter, AM/FM/PM demodulation, frequency counter, and audio analysis from 150 kHz to 1300 MHz. With the 11722A sensor module it measures RF power from -20 to +30 dBm; 8480-series sensors extend power coverage. The HP/Agilent 8901B is a fully automatic GPIB-programmable modulation analyzer combining RF power meter, AM/FM/PM demodulation, frequency counter, and audio analysis from 150 kHz to 1300 MHz. With the 11722A sensor module it measures RF power from -20 to +30 dBm; 8480-series sensors extend power coverage.

**MODEL****Agilent / HP /
Keysight 8901B****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****8901B****LISTING**<https://aumictechlabs.com/products/8901b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent HP Keysight 8901B Modulation Analyzer characterizes modulated RF signals from 150 kHz to 1.3 GHz. This single instrument integrates a power meter, modulation analyzer, frequency counter, and audio analyzer with full GPIB programmability. It delivers AM and FM modulation accuracy to 1%, phase modulation to 3%, and power measurements from -20 dBm to +30 dBm with the 11722A sensor or -70 dBm to +44 dBm with 8480 series sensors. Technical Specifications
Frequency Range: 150 kHz to 1.3 GHz Modulation Types: AM, FM, Phase Modulation (ϕ M)

Modulation Accuracy: AM/FM $\pm 1\%$; ϕM $\pm 3\%$ RF Power Measurement: -20 to $+30$ dBm (with 11722A); -70 to $+44$ dBm (with 8480 series) Power Meter Linearity: ± 0.02 dB plus ± 0.02 dB per range change Frequency Counter Resolution: 10 Hz Audio Measurement: 6-digit frequency resolution; distortion measurement at 400 Hz and 1000 Hz; RMS levels 100 mV to 3 V ($\pm 4\%$ accuracy) Adjacent Channel Power: ± 0.5 dB accuracy; >115 dB dynamic range; >90 dB selectivity Carrier Noise (with Options 030–037): SSB measurements to 1.3 GHz; ± 0.5 dB to -129 dBc/Hz; -150 dBc/Hz noise floor Display: 10-digit LED Memory: Eight non-volatile locations

Key Features

Integrated power meter, modulation analyzer, frequency counter, and audio analyzer in one unit Channel filters: 12.5 kHz, 25 kHz, 30 kHz spacing Front panel 50 MHz power reference ($\pm 0.7\%$, traceable to U.S. National Bureau of Standards) Meets CEPT standards for adjacent channel power Eight configurable measurement memory slots GPIB full automation and programmability

Typical Applications

RF design and signal characterization Modulation quality testing and validation Power and frequency measurement across UHF/microwave bands Audio distortion and RMS analysis Carrier noise performance evaluation

Compatibility & Integration

Works with Agilent 8480 series power sensors for extended dynamic range. Optional modules add rear-panel connections, high-stability reference (1×10^{-9}), external oscillator support, and extended low-frequency operation (48–440 Hz below 40°C).

Features & description

From manufacturer datasheet

Features

- Four instruments in one fully automatic package
- AM and FM measurement accuracy to about 1 percent class
- RF frequency coverage 150 kHz to 1300 MHz
- Built-in audio counter and distortion measurement
- Nonvolatile cal factor tables for power sensors
- HP-IB remote control of all functions
- Optional external LO Option 003

Applications

- Transmitter AM FM and phase modulation characterization
- RF power measurements with power-meter accuracy
- Carrier frequency counting and audio distortion analysis
- Adjacent channel power and carrier noise options 030 to 037

8901B Characteristics / Specifications

PARAMETER	VALUE
Model	8901B
Manufacturer	HP / Agilent / Keysight
Instrument Type	Modulation Analyzer
Alias	8901B; HP 8901B; Agilent 8901B
Frequency range	150 kHz to 1300 MHz
RF power with 11722A	-20 dBm to +30 dBm (100 kHz to 2.6 GHz sensor)
RF power with 8480 sensors	-70 dBm to +44 dBm class (sensor dependent)
RF power resolution watts mode	0.1 percent of full scale
RF power resolution dB mode	0.01 dB
RF range linearity ranges 2 to	+/-0.02 dB
RF range linearity range	+/-0.03 dB
Input SWR with 11722A	less than 1.15
AM rates below 10 MHz carrier	20 Hz to 10 kHz
AM rates 10 MHz to 1300 MHz	20 Hz to 100 kHz
AM depth	to 99 percent
AM accuracy class	+/-1 to +/-3 percent of reading +/-1 digit by band/rate
FM rates below 10 MHz carrier	20 Hz to 10 kHz
FM rates 10 MHz to 1300 MHz	20 Hz to 200 kHz
FM accuracy class	+/-2 percent of reading +/-1 digit (stated conditions)
Demodulated output distortion	less than 0.1 percent THD
Frequency counter resolution max	10 Hz
Remote control	HP-IB / IEEE 488
Operating temperature	0 C to 55 C
Power consumption	200 VA maximum
Line voltage	100/120/220/240 V 48 to 66 Hz

PARAMETER	VALUE
Weight net	23.4 kg
Dimensions module size class	7H x 1MW x 20D
Sensor module companion	11722A Notes Specs from HP/Agilent 8901B technical specifications with 11722A. Confirm Option 003 LO and Options 030-037 carrier noise/ACP hardware on the unit.

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 C to 55 C
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Power consumption	200 VA maximum
Line voltage	100/120/220/240 V 48 to 66 Hz
Weight net	23.4 kg
Dimensions module size class	7H x 1MW x 20D
Sensor module companion	11722A Notes Specs from HP/Agilent 8901B technical specifications with 11722A. Confirm Option 003 LO and Options 030-037 carrier noise/ACP hardware 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	
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Manufacturer	HP / Agilent / Keysight
Instrument Type	Modulation Analyzer
Alias	8901B; HP 8901B; Agilent 8901B
Frequency range	150 kHz to 1300 MHz
RF power with 11722A	-20 dBm to +30 dBm (100 kHz to 2.6 GHz sensor)
RF power with 8480 sensors	-70 dBm to +44 dBm class (sensor dependent)
RF power resolution watts mode	0.1 percent of full scale
RF power resolution dB mode	0.01 dB
RF range linearity ranges 2 to 5	+/-0.02 dB
RF range linearity range 1	+/-0.03 dB
Input SWR with 11722A	less than 1.15
AM rates below 10 MHz carrier	20 Hz to 10 kHz
AM rates 10 MHz to 1300 MHz	20 Hz to 100 kHz
AM depth	to 99 percent
AM accuracy class	+/-1 to +/-3 percent of reading +/-1 digit by band/rate
FM rates below 10 MHz carrier	20 Hz to 10 kHz
FM rates 10 MHz to 1300 MHz	20 Hz to 200 kHz
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Demodulated output distortion	less than 0.1 percent THD
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Line voltage	100/120/220/240 V 48 to 66 Hz
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PARAMETER	VALUE
Dimensions module size class	7H x 1MW x 20D
Sensor module companion	11722A

Notes
Specs from HP/Agilent 8901B technical specifications with 11722A. Confirm Option 003 LO and Options 030-037 carrier noise/ACP hardware on the unit.

Ordering Information

OPTION	DESCRIPTION
Option 003	Technical Specifications

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.