Keysight Technologies
P-Series Power Meters and P-Series Wideband Power Sensors

Configuration Guide

P-Series Power Meters:

N1911A Power Meter (single channel)
N1912A Power Meter (dual channel)

P-Series Power Sensors:

N1921A Power Sensor (50 MHz to 18 GHz)
N1922A Power Sensor (50 MHz to 40 GHz)

KEYSIGHT TECHNOLOGIES

Introduction

This configuration guide describes standard configurations, options and compatible accessories. Contact your local Keysight Technologies, Inc. representative for additional information.

P-Series Power Meters

The P-Series power meters provide peak, average, peak-to-average ratio power measurements, time-gated and free run modes, rise time, fall time and pulse width measurements.

The P-Series power meters are compatible with the 8480, E-Series and new P-Series power sensors. The P-Series power meters have a different sensor input connector than the EPM and EPM-P Series power meters, so it is necessary to use adapter cables. These adapter cables come in three different lengths. When using the 8480 or E-Series sensors, refer to the Cable Accessories section in this guide. For additional information, refer to the Literature References section.

The standard P-Series power meters include:
- Single-channel power meter, order N1911A or dual-channel power meter, order N1912A
- Input sensor connector(s) on the front panel
- Reference calibrator (1 mW, 50 MHz) connector on the front panel
- Documentation CD-ROM
- Keysight Instrument Control DVD
  - IO libraries suite
  - Command expert
  - BenchVue software platform
  - 30-day free trial of BenchVue power meter/sensor control and analysis app
- Supplied accessories: power cord (plug matches country destination requirements)
- USB adapter cable (part number 8121-1583, Cable-Assembly 4Pin-5Pin Male USB 2000 mm-LG)

P-Series Wideband Power Sensors

The P-Series wideband power sensors are designed specifically for operation with the P-Series power meters for wide bandwidth power and time measurements. These sensors are the only Keysight power sensors that have their cable permanently wired (hard-wired) into the sensor. This provides better wide bandwidth specifications compared to having a removable cable. Refer to the Sensor Cable Lengths section in this guide for part number and cable length information.

The standard P-Series power sensors include:
- Power sensor 50 MHz to 18 GHz, order N1921A
- Power sensor 50 MHz to 40 GHz, order N1922A
- Documentation CD-ROM

1. The Installation Guide is in English, French, and Japanese languages (part number N1912-90009).

Compatibility

Power sensor compatibility

The P-Series power meters are compatible with all current (N)8480, E-Series and P-Series power sensors. Refer to the Accessories section, P-Series meter cable adaptors N1917A/B and C.

Connector options for P-Series power meters

The following options are available on the P-Series power meters. [1]

Table 1. Connector options for P-Series power meters.

Option	Description
N1911A-003	Rear panel sensor and power reference connectors (single channel)
N1912A-003	Rear panel sensor and power reference connectors (dual channel)

Video output option (H01)

The video output provides a DC voltage proportional to the measured input power through a BNC connector on the rear panel. The DC voltage can be displayed on an oscilloscope for time measurement. This option replaces the recorder output on the rear panel. The video output impedance is 50 Ω.

- Video rise time: 13 ns
- Frequency range: 50 MHz to 40 GHz [2]

1. The P-Series power meters are configured for either front panel connectors (both sensor and power reference) or rear panel connectors. There are no options for parallel front and rear panel sensor inputs.
2. Need to turn off the auto-zero feature; otherwise, this will appear as a glitch in the video output signal.

P-Series Power Meter Optional Accessories

Table 2. P-Series power meter optional accessories.

Accessory part number	Description
N1911A-908 N1912A-908	Rack mount kit (one instrument)
N1911A-909 N1912A-909	Rack mount kit (two instruments)
34131A	Basic instrument transit case
34161A	Accessory pouch

Cable Accessories

Power sensor adapters for use with 8480 and E-Series power sensors:

Table 3. Cable accessories for use with 8480 and E-Series power sensors.

Accessory part number	Description
N1917A	P-Series meter cable adaptor, 1.5 m (5 ft)
N1917B	P-Series meter cable adaptor, 3 m (10 ft)
N1917C	P-Series meter cable adaptor, 10 m (31 ft)

Software Accessories

Keysight BenchVue software

Keysight BenchVue software for the PC accelerates testing by providing intuitive, multiple instrument measurement visibility and data capture with no programming necessary. You can derive answers faster than ever by easily viewing, capturing and exporting measurement data and screen shots. The N1911A/12A Power Meters are supported by Keysight BenchVue software's BV0007B Power Meter/Sensor Control and Analysis app.

For more information, **www.keysight.com/find/BenchVue**

P-Series Wideband Power Sensor Cable Lengths

Three fixed cable length options are available for the P-Series power sensors at 1.5 m, 3.0 m and 10 m. Option 105 is the standard (default) option.

Table 4. P-Series wideband power sensor cable lengths.

Option	Description
N1921A-105 N1922A-105	Fixed 1.5 m (5 ft) cable length
N1921A-106 N1922A-106	Fixed 3 m (10 ft) cable length
N1921A-107 N1922A-107	Fixed 10 m (31 ft) cable length

Calibration Option

The P-Series power meters and sensors are available with Option 1A7 (ISO17025 compliant calibration) or Option A6J (ANSI Z540 compliant calibration).

Documentation

The P-Series power meters are supplied with a Product Reference CD which contains the installation guide, user's guide, programing guide and service guide User's Guide Programming Guide. The following tables supply the option number as well as the Keysight part number (where appropriate) to order the documentation.

Table 5. Documentation.

Option	Description
N1911A-0BK N1912A-0BK	Additional English language manual set (User's Guide, part number N1912-90002 and Programming Guide part number N1912-90009)
N1911A-0BF N1912A-0BF	English-language Programming Guide (part number N1912-90009)
N1911A-0BW N1912A-0BW	Service Guide (part number N1912-90015)
N1911A-ABJ N1912A-ABJ	Japanese localization, User's Guide part number N1912-90007
N1921A-0B1 N1922A-0B1	Additional English language manual set, Operating and Service Manual, part number N1920-90007

Literature References

Publication title	Publication number
P-Series Power Meters and P-Series Wideband Power Sensors – Technical Overview	5989-1049EN
N1911A/N1912A P-Series Power Meters and N1921A/N1922A Wideband Power Sensors - Data Sheet	5989-2471EN
E4416A/E4417A EPM-P Series Power Meters and E-Series E9320 Peak and Average Power Sensors – Data Sheet	5980-1469E
EPM Series Power Meters E-Series and 8480 Series Power Sensors - Data Sheet	5965-6382E
Fundamentals of RF and Microwave Power Measurements (Part 1) - Application Note	5988-9213EN
Fundamentals of RF and Microwave Power Measurements (Part 2) - Application Note	5988-9214EN
Fundamentals of RF and Microwave Power Measurements (Part 3) - Application Note	5988-9215EN
Fundamentals of RF and Microwave Power Measurements (Part 4) - Application Note	5988-9216EN
4 Steps for Making Better Power Measurements - Application Note	5965-8167E
Choosing the Right Power Meter and Sensor - Application Note	5968-7150E

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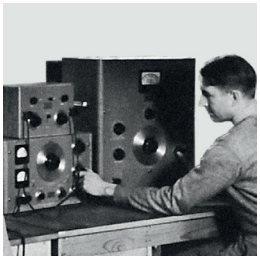

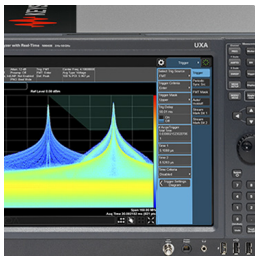

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