

## Product Datasheet - Technical Specifications



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# R&S®NPA501 POWER ANALYZER

Versatile power analyzer for AC/DC load and standby current characterization with graphical displays such as harmonic analysis, waveform and trend chart functions

## Description

In harmonic analysis, the R&S®NPA501 power analyzer graphically displays up to the 50th harmonic in a logarithmic amplitude scale. The user-configurable, dual-channel trend chart function for U, I, P, S, Q and F is unique in this class of instruments.

The brilliant QVGA color display (320 × 240 pixel) simultaneously displays up to 10 user-configurable measurement results with a refresh rate of 10 measurements per second.

The instrument has a basic accuracy of 0.05%. Signals are acquired from DC to 100 kHz at a sampling rate of 500 ksample/s. Current and voltage are displayed with 16 bit resolution.

The logging function lets users store measured data with a timestamp in .CSV format for a nearly unlimited period of time. Screen content can also be saved to a USB flash drive anytime at the push of a button.

A PASS/FAIL function lets users monitor numerous measurement results.



## Key facts

- ▶ Power measurement range: 50  $\mu$ W to 12 kW
- ▶ Analog bandwidth: DC to 100 kHz
- ▶ Sampling rate: 500 ksample/s
- ▶ 16 bit resolution for current and voltage
- ▶ Basic accuracy: 0.05%
- ▶ 26 different measurement and mathematical functions

Flyer  
Version 02.00

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# SPECIFICATIONS IN BRIEF

## Specifications in brief

Analog bandwidth	DC to 100 kHz
Basic accuracy	0.05% of reading
Display resolution	5 digits, 10 updates/s
Input impedance	2 M $\Omega$
Basic measurement functions	active power, apparent power, reactive power, lambda power factor, phase shift, frequency, voltage (RMS and average), current (RMS and average), total harmonic distortion, energy, data logging
Advanced and graphical measurement functions	minimum and maximum voltage, current and power, limit testing, trend chart mode, inrush mode, harmonics mode, waveform mode
Additional inputs/outputs	BNC, rear panel
Analog input	$\pm 10$ V (peak voltage)
Analog input accuracy	0.5% of reading
Analog output	$\pm 5$ V (peak voltage)
Digital input/output	yes
Display and resolution	8.9 cm (3.5") TFT (color), 320 × 240 pixel (QVGA)
Mains nominal voltage	100 V to 115 V/230 V at 50 Hz to 60 Hz
Maximum power consumption	35 W (meas.)
Operating temperature range	+5°C to +40°C
Storage temperature range	-25°C to +60°C
Dimensions	222 mm × 97 mm × 291 mm (8.74 in × 3.82 in × 11.46 in)
Weight	approx. 3.25 kg (7.16 lb)

All specifications refer to a sine reference signal, PF = 1, voltage to ground = 0 V, analog filter deactivated, digital filters activated and are valid for measurement values > 1% of measurement range.

# ORDERING INFORMATION

Designation	Type	Order No.
Power analyzer, DC to 100 kHz	R&S®NPA501	3657.0562.03
Power analyzer, DC to 100 kHz, incl. IEEE-488 (GPIB) interface	R&S®NPA501-G	3657.0562.05