

Product Datasheet - Technical Specifications



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R&S®NPA POWER ANALYZER FAMILY

All-In-One: The compact power analysis package



Key features

The R&S®NPA power analyzer is the first compact AC/DC load and standby current characterization tester for measurement with no additional tools such as computers or remote infrastructure. The instrument has performance and compliance protocols in line with IEC 62301, EN 50564 and EN 61000 3-2 along with a numerical and graphical display with 26 key parameters.

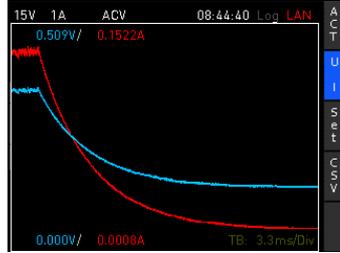
Ideal for

Engineering labs	General purpose
Production testing	Education

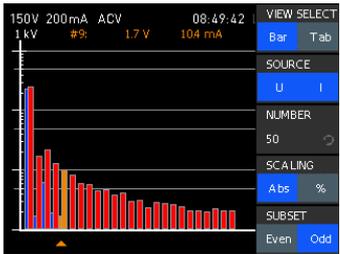
Key specifications	
Bandwidth	DC to 100 kHz
Sampling rate	500 ksamples/s
Resolution	simultaneous display of current and voltage, each with 16 bits
Voltage input	up to 600 V (RMS)
Current input	up to 20 A (RMS)
Basic accuracy	0.05 % of reading
Frequency accuracy	0.1 % of reading
Input impedance	2 MΩ

Your benefit	Features
Clear display of all measured parameters	<ul style="list-style-type: none"> ▶ Simultaneous display of up to 10 numerical measurement functions ▶ User configurable measurement display ▶ Graphical display modes for inrush, harmonic analysis, waveform and trend chart
High measurement accuracy	<ul style="list-style-type: none"> ▶ Basic accuracy: 0.05 % ▶ Signal acquisition from DC to 100 kHz at a sampling rate of 500 ksamples/s ▶ Simultaneous display of current and voltage, each with 16 bit resolution
Everyday measurement functions	<ul style="list-style-type: none"> ▶ 26 different measurement and mathematical functions ▶ Limit testing with pass/fail indication for up to six selectable limits

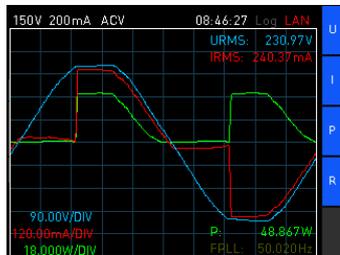
Graphical views



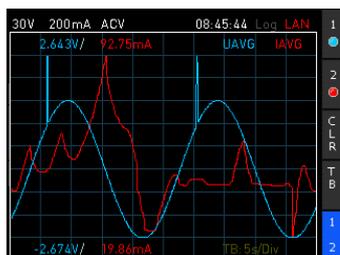
Inrush function



Harmonic analysis function



Waveform function



Trend chart function

Function overview

Function	Description	
Basic	P	Active power (W)
	S	Apparent power (VA)
	Q	Reactive power (VAR)
	PF	Power factor (λ)
	PHI	Phase shift (ϕ)
	FU	Voltage frequency value (Hz)
	FI	Current frequency value (Hz)
	FPLL	Acquisition frequency (Hz)
	URMS	RMS voltage (U RMS)
	UAVG	Average voltage (U AVG)
	IRMS	RMS current (I RMS)
	IAVG	Average current (I AVG)
	UTHD	Total harmonic distortion U
	ITHD	Total harmonic distortion I
	WHM, WHP, WH, AHM, AHP, AH	Energy counter (integrator values)
	Advanced & Graphical	UPPeak
UMPeak		Minimum voltage (U PEAK)
IPPeak		Maximum current (I PEAK)
IMPeak		Minimum current (I PEAK)
PPPeak		Maximum power (P PEAK)
PMPeak		Minimum power (P PEAK)
Harmonics		Bar graph of up to 50 harmonics
Waveform		Waveform display (displays one period of voltage, current or power)
Trend chart		Current and voltage displayed as a waveform
Inrush		Triggered display of waveform (single shot)
Compliance evaluation	Sensor input	Input for current probe/external shunt
	DIN/AIN	Digital/analog inputs and outputs (BNC)
	Limit/pass-fail	Limit display
	IEC62301	Standby standard
	EN50564	Extended standby standard
EN61000-3-2	Harmonic current for EMC, CE approval	

Basic functions: All models of R&S®NPA

Advanced & Graphical functions: R&S®NPA501, R&S®NPA501-G, R&S®NPA701, R&S®NPA701-G

Compliance evaluation functions: R&S®NPA701, R&S®NPA701-G

Ordering information

Base units	Item
Power meter, DC to 100 kHz	R&S®NPA101
Power analyzer, DC to 100 kHz	R&S®NPA501
Power analyzer, DC to 100 kHz, GPIB	R&S®NPA501-G
Compliance tester, DC to 100 kHz	R&S®NPA701
Compliance tester, DC to 100 kHz, GPIB	R&S®NPA701-G
Accessories	Item
Mains adapter, EU-version	R&S®NPA-Z1
Mains adapter, UK-version	R&S®NPA-Z2
Mains adapter, US version	R&S®NPA-Z3
Mains adapter, CHN/AUS version	R&S®NPA-Z4
19" rackmount kit, 2 HU	R&S®HZC95

