

ROHDE & SCHWARZ

NRVS

The Rohde & Schwarz NRVS is a highly accurate, single-channel RF power meter designed for a wide range of power measurements from DC up to 40 GHz, depending on the connected sensor. Offering compatibility with intelligent NRV-Z and URV5-Z sensors, it features automated configuration, non-volatile memory for setups, and specialized calculations for pulse peak power.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488 / IEC-625)
Display	4.5-digit LC display

Physical

Power Supply	100 V / 120 V / 220 V / 240 V ($\pm 10\%$), 47 Hz to 440 Hz, 12 VA
Operating Temperature	0 to +50 °C °C
Dimensions (W×H×D)	219 mm × 103 mm × 240 mm mm
Weight	2.5 kg

Measurement Capabilities

Frequency Range	0 Hz (DC) to 40 GHz (sensor dependent)
Power Measurement Range	-70 dBm to +45 dBm (sensor dependent)
Number of Channels	1
Measurement Modes	Average power, calculated pulse peak power, Peak Envelope Power (PEP with NRV-Z31 / NRV-Z33)
Pulse Duty Factor Range	0.0001 % to 100 %

Measurement Accuracy and Performance

Display Resolution Steps	3 selectable steps (0.1, 0.01, 0.001 dB)
Noise Suppression Filters	13 digital filters (automatic or manual selection)
Zero Adjustment	Automatic (initiated by key or GPIB command)

Reference Calibration Source

Optional Calibration Source	NRVS-B1 (Sensor Check Source)
Calibration Source Frequency	50 MHz
Calibration Source Power Level	1.00 mW (0 dBm)
Calibration Source Connector	N female

Sensor Compatibility

Supported Sensor Families	R&S NRV-Z, URV5-Z
Sensor Calibration Data Memory	Automatic readout of calibration data from sensor memory

Connectivity and Interfaces

GPIO Interface	IEEE-488.2 / IEC-625
Analog Recorder Output	0 to 3 V
DC Frequency Input	BNC, 0 to 10 V (for tracking frequency-response correction)

System and Control

Save/Recall Memory Registers	20 complete instrument setups
Operation Mode	Keyboard operated (no softkeys or menus)

Physical and Environmental

Storage Temperature Range	-40 °C to +70 °C
Form Factor	1/2 19" rack width, 2 HU

Power Supply

Power Consumption	approx. 12 VA
AC Input Voltage	100 V / 120 V / 220 V / 240 V (±10%, selectable)
AC Input Frequency	47 Hz to 440 Hz

Calibration Source

Calibration Source SWR	< 1.05 (with option NRVS-B1)
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Performance

Measurement Rate (Analog Display)	15 measurements/s
Measurement Rate (Digital Display)	5 measurements/s
Measurement Rate (GPIO)	up to 20 measurements/s
Warm-up Time	1 hour

Compliance

Safety Standard	EN 61010-1
RF Interference Suppression	EN 55011 Class B

Accuracy & Performance

Instrumentation Uncertainty	±0.5% (0.022 dB) at 23 °C ± 5 °C
Temperature Coefficient of Instrumentation	< 0.1% per K (0.005 dB per K)

Inputs & Outputs

Sensor Connector	LEMO 12-pin (Series 2C) on front panel
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Display & Readings

Supported Units	W, dBm, dB, dBμV, V, %
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Environmental

Maximum Operating Altitude	4600 m
Maximum Storage Altitude	12000 m
Humidity Resistance	Up to 95% relative humidity at +40 °C, non-condensing (compliant with IEC 68-2-30)

Compliance & Standards

Electromagnetic Compatibility (EMC)	Compliant with EN 55011 Class B and EN 50082-1
Vibration Resistance	5 to 55 Hz (compliant with IEC 68-2-6)
Shock Resistance	40g shock spectrum (compliant with IEC 68-2-27)

Options

Rear Sensor Connector Option (NRVS-B5)	Relocates the sensor connector from the front panel to the rear panel
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TECHNOLOGY

RF and Microwave Power Meter

APPLICATIONS

RF power measurement, peak envelope power calculation, and RF sensor calibration

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.