

ROHDE & SCHWARZ

URV5

The Rohde & Schwarz URV5 is a classic, highly accurate RF millivoltmeter and power meter featuring dual measurement channels. It provides broadband voltage, level, and power measurements across a wide frequency range, depending on the attached sensor. Equipped with an intelligent sensor interface, the URV5 automatically retrieves individual calibration factors from connected probes, ensuring high precision and ease of operation.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488)
Display	7-segment LCD, 4½-digit numeric readout with 50-segment analog bargraph

Physical

Power Supply	100 V / 120 V / 220 V / 240 V AC $\pm$ 10%, 47 to 440 Hz, 15 VA
Operating Temperature	0 to +55 °C °C
Dimensions (W×H×D)	219 mm × 103 mm × 350 mm mm

Measurement Performance

Measurement Channels	2 independent channels (Input A and Input B)
Voltage Measurement Range	200 μ V to 1000 V (sensor dependent)
Basic Measurement Uncertainty	0.5% (excluding sensor uncertainty)
Measurement Resolution	0.001 dB / 4.5 digits

Probe and Sensor Compatibility

Sensor Connectors	Two 12-pin R&S probe/sensor sockets on front panel
Calibration Factor Recall	Automatic (reads EEPROM in sensor connector)
Compatible RF Probes	URV5-Z series (e.g., URV5-Z2, URV5-Z7)
Compatible Power Sensors	NRV-Z series

Measurement Functions and Processing

Measurement Modes	A, B, A-B, B-A, A/B, B/A, PEP (Peak Envelope Power)
Display Units	V, dBV, dB μ V, dBu, W, dBm, dB (relative), % (relative)
Reference Impedance Selection	Selectable from 1 Ω to 100 k Ω (default 50 Ω and 75 Ω)
Measurement Rate	Up to 30 measurements per second
Averaging Factor Range	1 to 512 (automatic or manual)
Zeroing Function	Automatic zero adjustment
Save/Recall Setups	Up to 9 complete instrument configurations
Limit Monitoring	High/low limit values with visual display indication

Interfaces and Connectivity

Analog Output	Rear panel BNC connector (proportional to display value)
External Trigger Input	Rear panel BNC connector, TTL level

User Interface and Display

Display Technology	Liquid Crystal Display (LCD)
Analog Trend Indication	50-segment analog bargraph on LCD
Power-On Self-Test	Automatic internal check of microprocessor, RAM, ROM, and display on startup

Power Supply and Mechanical

Power Consumption	15 VA
Line Frequency Range	47 to 440 Hz
Cabinet Type	Half 19-inch width, 2U height

Environmental and Compliance

Storage Temperature Range	-40 to +70 °C
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Interfaces & Control

GPIO Interface Functions	SH1, AH1, T6, L4, SR1, RL1, PP1, DC1, DT1, C0
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Compliance & Safety

Safety Compliance	Class I to VDE 0411 / IEC 348
Radio Interference Suppression	To VDE 0871, Limit Class B and FCC Part 15, Class B

Environmental

Permissible Relative Humidity	Up to 95% at +40 °C (non-condensing)
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Options

Rear Panel Sensor Connectors Option	URV5-B1 (moves sensor connectors from front to rear panel)
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Remote Control

Remote Control Command Language	Proprietary Rohde & Schwarz command set
GPIO Device Address Range	0 to 30

Calibration & Maintenance

Recommended Calibration Interval	1 year
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TECHNOLOGY

RF Voltage & Power Measurement

APPLICATIONS

Broadband RF voltage, level, and power measurements in laboratory and automated testing environments

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