

Millivoltmeter URV5

DC, 9 kHz to 3/26.5 GHz

200 μ V to 1000 V

Voltage, level, power measurements; trend indication



Photo 33034

Brief description

Millivoltmeter URV5 is a broadband voltage, level and power meter of high accuracy and sensitivity. It is suitable both for manual operation and for use in systems. A wide choice of individually calibrated probes and sensors allows URV5 to be used for a great variety of measurements:

- With RF probe and DC probe for no-load AC and DC voltage measurements
- Voltage (and power) measurements in coaxial 50 Ω and 75 Ω systems using low-reflection and low-loss insertion units
- Power measurements up to 26.5 GHz using Power Sensors NRV-Z1 to -Z6

Main features

- Two test inputs
- High accuracy through μ P-controlled error correction: $\pm 1\%$
- Dynamic range >94 dB
- IEC/IEEE-bus interface
- Readout in all standard units with selectable reference impedance; relative measurements
- Optional DC output
- PEP measurement

Specifications in brief; voltage probes page 262, power sensors page 266

| | | | | | | | | | | | | | |
|---|--|----|----|----|-----|----|----|------|------|---|---|----|-----|
| Probes and sensors | all URV5 probes and NRV sensors, except NRV-Z3x and NRV-Z5x, -Z15 | | | | | | | | | | | | |
| Test channels | 2 (A and B) | | | | | | | | | | | | |
| Absolute measurement | A, B | | | | | | | | | | | | |
| Relative measurement | A/REF _A , B/REF _B , A/B, B/A | | | | | | | | | | | | |
| Absolute readout | V, W, dBm, dBV | | | | | | | | | | | | |
| Relative readout | Δ V, Δ W, $\Delta\%$, Δ dB, X/REF | | | | | | | | | | | | |
| Resolution | 0.01% or 0.01 dB | | | | | | | | | | | | |
| Accuracy of voltage readout in V (18 to 28°C) | $\pm 0.15\%$ of rdg per channel to reduce display noise in 6 steps (FO to F5), selectable | | | | | | | | | | | | |
| Filter | via keyboard or remote control | | | | | | | | | | | | |
| Zero adjustment | approx. 1 measurement/s with filter FO, up to 30 measurements/s with filter F5 | | | | | | | | | | | | |
| Measurement rate (manual) | approx. 0.05 s with filter F5, up to 20 s with filter FO | | | | | | | | | | | | |
| Measurement time (IEC/IEEE bus) | | | | | | | | | | | | | |
| PEP measurement | | | | | | | | | | | | | |
| Pulse width | approx. 200 μ s to CW | | | | | | | | | | | | |
| Min. pulse repetition frequency | | | | | | | | | | | | | |
| Filter | | | | | | | | | | | | | |
| f_{min}/Hz | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td>FO</td> <td>F1</td> <td>F2</td> <td>F3</td> <td>F4</td> <td>F5</td> </tr> <tr> <td>0.05</td> <td>0.25</td> <td>1</td> <td>5</td> <td>25</td> <td>100</td> </tr> </table> | FO | F1 | F2 | F3 | F4 | F5 | 0.05 | 0.25 | 1 | 5 | 25 | 100 |
| FO | F1 | F2 | F3 | F4 | F5 | | | | | | | | |
| 0.05 | 0.25 | 1 | 5 | 25 | 100 | | | | | | | | |

| | |
|--|--|
| Frequency-response correction (selectable) | sensor-specific frequency response after entry of test frequency |
| Attenuation compensation (selectable) | one attenuation value per channel can be entered (-199.99 to +199.99 dB) |
| Reference value for relative measurements | one value per channel |
| Optional DC Output URV5-B2 | |
| Output voltage range (EMKF) | -1.999 to +1.999 V, $R_{out} = 1 \text{ k}\Omega$ |
| Resolution; error | 1 mV (10 digit); $\pm 2 \text{ mV}$ |
| General data | |
| Remote control | IEC 625-1 (IEEE 488) for control of all instrument functions |
| Interface functions | SH1, AH1, T5, L4, SR1, RL1, DC1, DT1, PP1 |
| Power supply | 100/120/220/240 V $\pm 10\%$ 47 to 63 Hz, 400 Hz, 30 VA |
| Dimensions (W x H x D); weight | 241 mm x 110 mm x 340 mm; 4.4 kg |

Ordering information

| | | |
|-----------------------------|---------|--------------|
| Millivoltmeter | URV5 | 0394.8010.02 |
| Options | | |
| DC Output | URV5-B2 | 0079.0631.00 |
| Service Kit for Calibration | UZ-8 | 0394.9968.02 |