

Directional wattmeter

- 2 to 2700 MHz
- 3 mW to 1000 W



ORITEL

RW 501 RW 511 RW 521 RW 5012

ORITEL RW 500 directional wattmeters are specially designed for the set-up and maintenance of HF, VHF, UHF transmission stations.

They measure in watt:

- the power supplied by a transmitter,
- the power reflected by the “feeder-antenna” unit from 2 MHz to 2.7 GHz.

- Very simple to use and extremely accurate measurement.
- Excellent site or laboratory instruments, sturdy and rainproof.
- A shoulder bag is available to carry and protect the instruments.

The ORITEL range of wattmeters for military and civil applications and for radiotelephony

ORITEL RW 501, 511 and RW 5012 wattmeters have been designed for military and civil use. They are eminently suitable for this type of market: easy verification of installations without investing in sophisticated and expensive instruments. Verifications of the transmitter unit, cables and antennae or audio circuits are easy and rapid and do not require any special technical skill.

ORITEL RW 521 wattmeter for radiotelephony has been designed to enable customers to obtain information, at a low cost, regarding the installation quality of a transmitter including its cables and antennae. Measurements are taken directly by the installation assembly team without the presence of a qualified technician being required for acceptance purposes. The same applies to maintenance throughout the lifetime of the system, measurements can be taken quickly and easily.

As regards the parameters, both the power of the transmitter and the value of the Standing Wave Ratio (S.W.R.) are measured to verify that the installation's performance conforms to expectations.

Model	Frequency	Power (4)		Accuracy (3)	Use
		Incident	Reflected		
ORITEL RW 511 NATO code 6625-14-417-3785	2 to 30 MHz	30 W to 1000 W (1)	10 W to 300 W	$\pm 7.5\%$ for average power $\pm 10\%$ for peak power	Single sideband transmitting (SSB)
ORITEL RW 5012	25 to 500 MHz	1 W to 300 W (2)	0.3 W to 100 W	$\pm 6\%$	VHF, police networks
ORITEL RW 501 NATO code 6625-14-399-6017	25 to 1300 MHz	1 W to 300 W (2)	0.3 W to 100 W	$\pm 6\%$ from 25 to 1000 MHz $\pm 8\%$ from 1000 to 1300 MHz	FM, TV Radio networks
ORITEL RW 521 NATO code 6625-14-441-7702	1.3 to 2.7 GHz	+10 to +40 dBm (5)	+5 to +35 dBm (5)	$\pm 6\%$	VHF-FH Rural networks

(1) Measurement possible up to 1200 W • (2) Measurement possible up to 360 W • (3) As a % of the full-scale value in W between + 20°C and + 25°C for power measured with a spectral purity ≥ 40 dB • (4) Full-scale values in 6 ranges (4 ranges for RW 511) in the 1, 3, 10 ratios... • (5) Scale in dBm

SPECIFICATIONS

■ PRINCIPLE

The main component is a wideband bi-directional coupler which simultaneously samples and detects a fraction of the incident power and part of the reflected power. After amplification, the voltage supplied by the bi-coupler branch detectors is used to indicate the measurements on a galvanometer graduated in watts.

- **Impedance:** 50 Ω
- **Insertion loss:** < 0.1 dB
- **Residual S.W.R.:** ≤ 1.15
- **Input and output connectors:** N female
- **Power supply:**
2 x 1.5 V batteries ; one 9 V battery for the RW 511
- **Operating temperature:** 0 to +50°C
- **Weight:** approximately 1.4 kg
- **Dimensions (l x h x d) :** 180 x 120 x 60 mm



Protective shoulder bag, ideal for measurements in the field

ORDERING REFERENCES

- **ORITEL RW 511** **P01.2551.02**
Supplied with one 9 V battery and user's manual
- **ORITEL RW 5012** **P01.2551.04**
- **ORITEL RW 501** **P01.2551.01**
- **ORITEL RW 521** **P01.2551.03**
Supplied with two 1.5 V batteries and user's manual
- **Accessory**
- Shoulder bag **P01.2980.46**

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