

WATTMETER, ABSORPTION, A.F. NO. 1 CT44

(Joint-Services Designation: Absorption Wattmeter No. CT44)

SUMMARY OF DATA


PURPOSE

Measurement of audio frequency power.

DESCRIPTION

A sealed, tropicalised instrument to measure power from a minimum of $10 \mu\text{W}$ to a maximum of 6W in 10 ranges. A matching transformer providing eleven switched ranges permits the impedance of the source under test to be matched to the meter circuit.

PERFORMANCE

Power Measurement:	Ten ranges as follows:- 0-200, 600 μW 0-2, 6, 20, 60, 200, 600 mW 0-2, 6W.	
Accuracy (at 1 kc/s and 20°C):	$\pm 5\%$ of reading from full scale to half scale and $\pm 2\frac{1}{2}\%$ of f.s.d. from half scale to 10% of f.s.d. on all impedance ranges and power levels above 200 μW . On the 200 μW range, $\pm 10 \mu\text{W}$.	
Input Impedance:	2.5, 5, 10, 50, 100, 150, 300, 600 ohms 4, 8 and 20 kilohms.	
Input Impedance Accuracy:	$\pm 3\%$ on all impedances of 50 ohms and above. On the 2.5 and 5 ohms input, $\pm 5\%$ of nominal.	
Power Ratio:	-10 dB to +38 dB relative to 1 mW .	
Frequency Characteristic:	± 1 dB from 100 c/s to 10 kc/s) ± 2 dB from 50 c/s to 20 kc/s) With reference to 1 kc/s.	
Temperature Characteristic:	$\pm 5\%$ of f.s.d. in the range $+15^{\circ}\text{C}$ to $+40^{\circ}\text{C}$ rising to $\pm 30\%$ of f.s.d. in the range -10°C to $+55^{\circ}\text{C}$.	

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POWER REQUIREMENTS

None.

PHYSICAL DATA

Height 12 in., Length $8\frac{1}{2}$ in., Depth 7 in., Weight $11\frac{1}{2}$ lb (approx.)

OTHER SERVICE OR COMMERCIAL DESIGNATIONS

Army Designation: ZD02417 Wattmeter, Absorption, A.F. No. 1.

Air Ministry: 10AS/98

Marconi Instrument Equivalent: A.F. Absorption Wattmeter Type TF938

Note: CT44 consists of Wattmeter, Absorption, A.F. No. 1, Pattern ZD00661 in a ribbed cast aluminium case and a protective front cover. The complete instrument together with its cast aluminium case and cover, forms Pattern ZD02417 Wattmeter Absorption, A.F. No. 1, CT44.

REMARKS

The instrument may be stored at -40°C but not operated until it has recovered to -10°C .