

BRIDGE, Type 1

COMPARATOR SCALE:

External resistance, capacitance and inductance standards can be used in conjunction with the Bridge circuit. Two ranges are available, viz., ± 10 per cent. of the value of the external standard, and a wide range enabling comparison to be made up to 100 times or down to 0.01 of the value of an external standard. The comparator scale (± 10 per cent. of external standard) will be found to be most useful. A divergence of 1 per cent. represents approximately 0.5 in. (1.25 cm.) on a linear scale.

BALANCE INDICATOR:

An extremely sensitive Valve Voltmeter is used as the Bridge Indicator, feeding a moving coil meter and provided with a Variable Sensitivity control.

CONDENSER LEAKAGE and INSULATION:

A total of 54 insulation (leakage) ranges are incorporated, leakage currents being directly indicated on the moving coil meter.

Insulation test voltages can be obtained from 5-450V d.c., the moving coil of the instrument giving a first indication of 0.01 μ A (0.1 of full scale deflection). This represents an ability to read resistances up to 45,000M Ω .

ELIMINATION OF CONSEQUENTIAL BALANCING:

Inductance measurements can be made without consequential balancing difficulties resulting from the sequential use of the Balance and Phasing controls. On this Bridge, initial balance can be obtained for inductance and final balance given by the calibrated "Q" Balance control.

COMPENSATION FOR INTERNAL CAPACITANCE:

The internal capacitance of the instrument has been eliminated electronically, thus enabling capacitors down to a few pF to be measured without the necessity of subtracting the value of the internal strays from the reading given by the instrument.

"Q" and POWER FACTOR CONTROL:

A continuously variable phase balance control is provided operative as a power factor control over all capacity ranges, and as a "Q" control on inductance ranges.

INTERNAL OSCILLATOR:

The instrument measures resistance using d.c., and capacitance and inductance using 1,000 c/s signal generated by an internal oscillator.

POWER SUPPLY: 100-110V and 200-250V a.c., 40/65 c/s.

DIMENSIONS: With lid closed: $15\frac{1}{2} \times 10\frac{1}{2} \times 10$ inches, approx.
 $39 \times 26.6 \times 25.5$ cm.

WEIGHT: 16 lbs. approx. (7.3 kg.)

