COMPONENT MEASUREMENT

Universal Bridge Models 4260A, 4265B







4260A Description

Measurements of C, R, L, D and Q are easily made with Hewlett-Packard's Model 4260A Universal Semi-Automatic Impedance

Nulling is easily accomplished with a unique auto-balance circuit. Illuminated pointers (<CRL>) automatically indicate whether a null is up- or down-scale. Both range and CRL controls can be set watching these pointers.

Components may be biased by connecting a battery to rear terminals. An external oscillator and detector can be used for measurements in the 20 Hz-20 kHz range.



4265B

4265B Description

Hewlett-Packard's Model 4265B Universal Bridge provides an economical way to make precision measurements of L, C, or R and D or Q. Components can be measured in ranges of 0.1 µH to 1111 H in inductance, 0.1 pF to 1111 μ F in capacitance and 0.1 m Ω to 1.111 M Ω in resistance with a basic measurement accuracy of 0.2% of reading for L, C, and R.

Measurement frequency range is 50 Hz to 10 kHz with an external oscillator, and 1 kHz with internal oscillator.

Specifications

	Model		4260A			4265B	
C			1000 pF to 1000 μF, 7 ranges			1000.0 pF to 1000.0 μF, 7 ranges	
Full scale ranges R		L	1000 μH to 1000 H, 7 ranges 10 Ω to 10 MΩ, 7 ranges			1000.0 μH to 1000.0 H, 7 ranges 1000.0 mΩ to 1.0000 MΩ, 7 ranges	
		R					
	Range	С	1 pF to 1 nF	1 nF to 100 μF	100 μF to 1000 μF	all ranges except →	1000.0 μF range only
		L	1 μH to 1 mH	1 mH to 100 H	100 H to 1000 H	all ranges except →	1000.0 μH range only
		R	10 m Ω to 10 Ω	10 Ω to 1 MΩ	1 M Ω to 10 M Ω	all ranges except →	1000.0 mΩ range only
Accuracy (% of reading))	±(2% + 1 digit)	±(1% + 1 digit	±(2% + 1 digit)	±(0.2% of reading + 0.01% of F.S.)	± (0.4% of reading + 0.01% of F.S.)
	Range		LOW D (series C)		HIGH D (parallel C)	series C	parallel C
D			0.001 to 0.12		0.05 to 20	0.001 to 1	0.1 to 1000
	Accuracy		$\pm \frac{2}{\sqrt{\text{D of reading}}} \%$		+(10 D of reading + 4)% -(10 \sqrt{D} of reading + 2)%	±(5% of reading + 2 minor divisions)	±(5% of rdg + 2 minor divisions) for 1/D
	Range		LÓW Q (series L)		HIGH Q (parallel L)	series L	parallel L
Q			0.05 to 20		8 to 1000	0.001 to 10	1 to 1000
*	Accuracy		+(10/Q of reading + 4)% $-(10/\sqrt{Q} \text{ of reading } + 2)\%$		$\pm2\sqrt{Q}$ of reading $\%$	±(5% of reading + 2 minor divisions)	±(5% of rdg + 2 minor divisions) for 1/Q
Oscillator			internal: 1 kHz $\pm 2\%$, 100 mV rms $\pm 20\%$ external: 20 Hz to 20 kHz, \leq 2 V rms.			internal: 1 kHz ± 15 Hz, ≤ 0.4 V rms external: 50 Hz to 10 kHz or dc for R-measurement; ≤ 4 V rms	
	DC bias		Voltage ≤6 V, current ≤10 mA			Voltage ≤250 V, current ≤10 mA	

General (4260A)

Power: 115 or 230 volts $\pm 10\%$, 50–60 Hz, approx. 7 VA. Size: 166 mm H x 198 mm W x 279 mm D (6.5" x 7.8" x 11").

Weight: Net, 5 kg (11 lb). Shipping, 6.8 kg (15 lb).

Options Price Opt 910: Extra Manual add \$11 4260A Universal Bridge \$1780 General (4265B)

Power: $100/120/200/240 \text{ V} \pm 10\%$; 48 to 440 Hz, 5 VA.

Size: 376 mm H x 393 mm W x 115 mm D (14.8" x 15.5" x 4.5").

Weight: Net, 5.5 kg (12.1 lb). Shipping, 7.1 kg (15.7 lb).

Ordering Information Price 16029A Test Fixture \$160 Opt 910: Extra Manual add \$11 4265B Universal Bridge \$1725