Table 1-1. Specifications

CAPACITANCE MEASUREMENT

CAPACITANCE
Range: 1 pF to 1000 μF, in 7 ranges.
Accuracy:
±(1% + 1 Digit), from 1 nF to 100 μF.
±(2% + 1 Digit), from 1 pF to 1000 μF.
Residual capacitance ≈ 2 pF.

DISSIPATION FACTOR
Range:
LOW D - - - D (of series C): 0.001 to 0.12.
HIGH D - - - D (of parallel C): 0.05 to 50.
Accuracy:
LOW D - - - D (of series C): ±(5% + 0.002) or ONE DIAL DIVISION, whichever is greater.
HIGH D - - - 1/D (of parallel C): ±(5% + 0.05) or ONE DIAL DIVISION of LOW Q dial, whichever is greater.
(C greater than 100 pF.)

INDUCTANCE MEASUREMENT

INDUCTANCE
Range: 1 μH to 1000 H, in 7 ranges.
Accuracy:
±(1% + 1 Digit), from 1 mH to 100 H.
±(2% + 1 Digit), from 1 μH to 1000 H.
Residual inductance ≦ 1 μH.

QUALITY FACTOR
Range:
LOW Q - - - Q (of series L): 0.02 to 20.
HIGH Q - - - Q (of parallel L): 8 to 1000.
Accuracy:
LOW Q - - - Q (of series L): ±(5% + 0.05) or ONE DIAL DIVISION, whichever is greater.
HIGH Q - - - 1/Q (of parallel L): ±(5% + 0.002) or ONE DIAL DIVISION of LOW D dial, whichever is greater.
(L greater than 100 μH.)

RESISTANCE MEASUREMENT

RESISTANCE
Range: 10 milliohms to 10 megohms, in 7 ranges.
Accuracy:
±(1% + 1 Digit), from 10 ohms to 1 megohm.
±(2% + 1 Digit), from 10 milliohms to 10 ohms and 1 megohm to 10 megohms.
Residual resistance ≈ 3 milliohms.
Resistance measurements at DC only.

ELECTRONIC AUTO NULL

Eliminates need for DQ adjustments in parallel C and series L measurements at 1 kHz.
Accuracy (when D ≦ 1, Q ≧ 1 and CL measurements are made in 3 and 4 figures) equals [normal operating condition ±0.5%].

AUTOMATIC NULL DIRECTION INDICATOR

Direction of the CRL control rotation required for the bridge null is automatically indicated by the front panel indicator lights.

OSCILLATOR AND DETECTOR

INTERNAL OSCILLATOR: 1 kHz ±2%, 100 mV rms ±20%.

INTERNAL DC SUPPLY: Less than 40 volts at nominal AC line voltage.

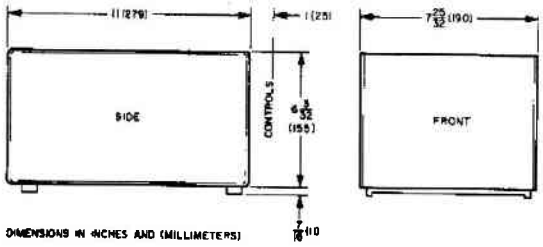
INTERNAL DETECTOR: Tuned amplifier at 1 kHz; functions as a preamplifier for measurements with external generator.

EXTERNAL OSCILLATOR: 20 Hz to 20 kHz measurements of capacitance, inductance, dissipation factor and quality factor are possible with external oscillator (range will be a function of applied frequency).

GENERAL

POWER SUPPLY: 115 or 230 volts ±10%, 50 or 60 Hz, approx. 7 watts.

DIMENSIONS:



WEIGHT:
Net, 11 lbs. (5 kg).
Shipping, 15 lbs. (6, 8 kg).

ACCESSORY SUPPLIED: 7 ft. power cable with NEMA plug.

EQUIPMENT AVAILABLE:

18-pin printed circuit extender board 5060-2041
15-pin printed circuit extender board 5060-0049
DC Null Voltmeter, HP Model 413A
20 Hz to 20 kHz Oscillator, HP Model 200CD
Oscilloscope, HP Model 140A