

## SPECIFICATIONS

### AS A VOLTMETER:

**RANGE:** .001V full scale to 10V in nine 1X and 3X ranges.

**ACCURACY:**  $\pm 1\%$  of full scale on all ranges exclusive of noise and drift.

**ZERO DRIFT:** Less than 1mV per 24 hours, less than 150 $\mu$ V per  $^{\circ}$ C.

**METER NOISE:**  $\pm 25\mu$ V maximum with input shorted on most sensitive range.

**INPUT IMPEDANCE:** Greater than  $10^{14}\Omega$  shunted by 20pF. Input resistance may also be selected in decade steps from 10 to  $10^{11}\Omega$ .

### AS AN AMMETER:

**RANGE:**  $10^{-14}$ A full scale to 0.3A in twenty-eight 1X and 3X ranges.

**ACCURACY:**  $\pm 2\%$  of full scale on 0.3 to  $10^{-11}$ A ranges using the smallest available multiplier setting;  $\pm 4\%$  of full scale on  $3 \times 10^{-12}$  to  $10^{-14}$ A ranges.

**METER NOISE:** Less than  $\pm 3 \times 10^{-15}$ A.

**OFFSET CURRENT:** Less than  $5 \times 10^{-15}$ A.

### AS AN OHMMETER:

**RANGE:** 100 $\Omega$ , full scale to  $10^{13}\Omega$  in twenty-three linear 1X and 3X ranges.

**ACCURACY:**  $\pm 3\%$  of full scale on 100 to  $10^9\Omega$  ranges using the largest available multiplier setting;  $\pm 5\%$  of full scale on  $3 \times 10^9$  to  $10^{13}\Omega$  ranges.

### AS AN COULOMB METER:

**RANGE:**  $10^{-13}$ C full scale to  $10^{-6}$ C in fifteen 1X and 3X ranges.

**ACCURACY:**  $\pm 5\%$  of full scale on all ranges. Drift due to offset current does not exceed  $5 \times 10^{-15}$ C per second.

### AS AN AMPLIFIER:

**INPUT IMPEDANCE:** Greater than  $10^{14}\Omega$  shunted by 20pF. Input resistance may also be selected in decade steps from 10 to  $10^{11}\Omega$ .

**OUTPUTS:** Unity-gain output and either voltage or current recorder output.

**UNITY-GAIN OUTPUT:** At DC, output is equal to input within 10 ppm, exclusive of noise and drift, for output currents of 100 $\mu$ A or less. Up to 1mA

may be drawn for input voltages of 10V or less. Output polarity is same as input polarity.

**VOLTAGE RECORDER OUTPUT:**  $\pm 1$ V for full-scale input. Internal resistance is 910 $\Omega$ . Output polarity is opposite input polarity.

**Gain:** 0.1, 0.33, etc., to 1000.

**Frequency Response (within 3db):** DC to 40kHz at a gain of 1 and lower, decreasing to DC to 100Hz at maximum gain. Full output response limited to 3kHz on any gain.

**Noise:** Less than 3% rms of full scale at gain of 1000, decreasing to less than 0.5% at gains below 10.

**CURRENT RECORDER OUTPUT:**  $\pm 1$ mA for full-scale input, variable  $\pm 5\%$  with 1400 $\Omega$  recorders.

### GENERAL:

**ISOLATION:** Circuit ground to chassis ground: Greater than  $10^9\Omega$  shunted by .0015 $\mu$ F. Circuit ground may be floated up to  $\pm 1500$ V with respect to chassis ground.

**Polarity:** Meter switch selects left-zero (positive or negative) or center-zero scales. Meter switch does not reverse polarity of outputs.

**CONNECTORS:** Input: Teflon-insulated triaxial Bendix 33050-2. Low: Binding post. Voltage or current output: Amphenol 80-PC2F. Unity-gain output, chassis ground: Binding posts.

**BATTERY CHECK:** Condition of all batteries may be checked with front panel controls.

**BATTERIES:** Six 2N6 (or 246, VS305, NEDA 1602); one RM-1W. 1000 hours battery life.

**DIMENSIONS, WEIGHT:** Overall bench size 10 $\frac{3}{4}$  in. high  $\times$  7 in. wide  $\times$  11 $\frac{1}{2}$  in. deep (275  $\times$  175  $\times$  290mm). Net weight, 13 pounds (5.7kg).

**ACCESSORIES SUPPLIED:** Model 6011 Input Cable: 30" triaxial cable with triaxial connector and 3 alligator clips. Mating output connector.