

232A guarded Wheatstone resistance measuring system

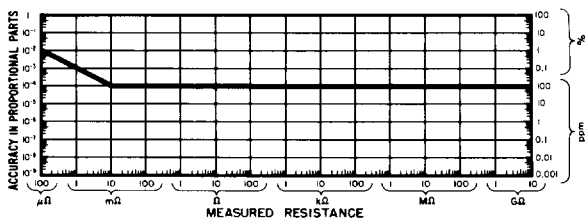


230B RESISTANCE BRIDGE 803A DC GENERATOR-DETECTOR INTERCONNECTION KIT

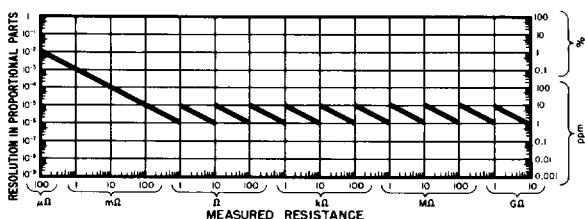
Accuracy, resolution, and sensitivity are the three factors that limit the precision of any measurement. Within this framework, an optimized measuring system will provide (1) an accuracy limited only by the state of the art, (2) resolution capable of taking full advantage of the accuracy, and (3) measuring sufficient to permit full use of the resolution. These three graphs for the Model 232A system illustrate its performance capabilities in terms of these essential design goals.

DIMENSIONS

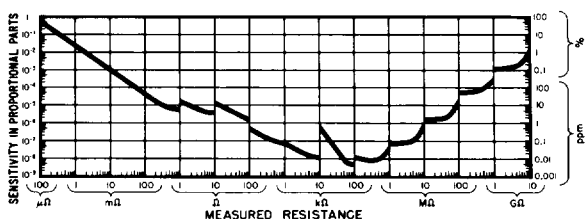
WIDTH 19.7 in. (50 cm)
HEIGHT 19.7 in. (50 cm)
DEPTH 14 in. (35.6 cm)
WEIGHT 46 lb (21 kg)



accuracy



resolution



sensitivity

230B resistance bridge

The Model 230B Resistance Bridge features large, easy-to-read numbers in a single line to reduce reading errors. The range switch automatically sets the decimal point and indicates the unit of resistance. Guarded terminals are provided to allow connection of unknown resistors for either two- or three-terminal measurements.

Resistance Range: 11 ranges, 1.2 Ω to 12 $G\Omega$ full scale.

Resolution: Better than 1 ppm of full scale on any range. (1 $\mu\Omega$ per dial division on lowest range.)

Accuracy*: $\pm 0.01\%$ of reading or ± 1 dial division (1 ppm of full scale), whichever is greater, when corrected for short-circuit resistance.

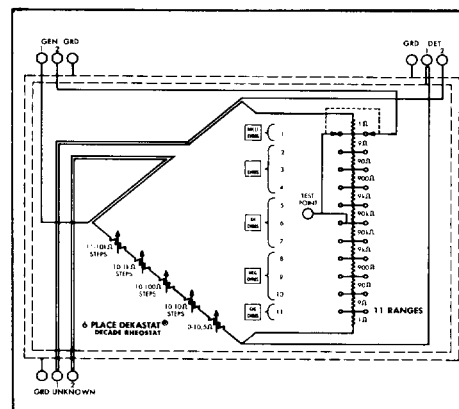
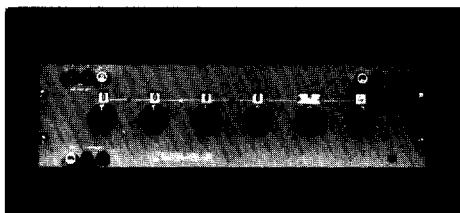
Short-Circuit Resistance: Approx 0.4 m Ω (plus test lead resistance).

Temperature Coefficient:** 10 ppm/ $^{\circ}\text{C}$ on ranges 120 Ω through 120 M Ω ; ± 20 ppm/ $^{\circ}\text{C}$ on other ranges.

Power Input: 1 W continuous, max.

Dimensions: Width 19 in. (48.25 cm), height 5.25 in. (13.3 cm), depth 7 in. (17.8 cm).

Weight: 10 lb (4.5 kg).



*At 23 $^{\circ}\text{C}$ and low input power.
**Above 1/100th of full scale, 20 $^{\circ}$ to 30 $^{\circ}\text{C}$.