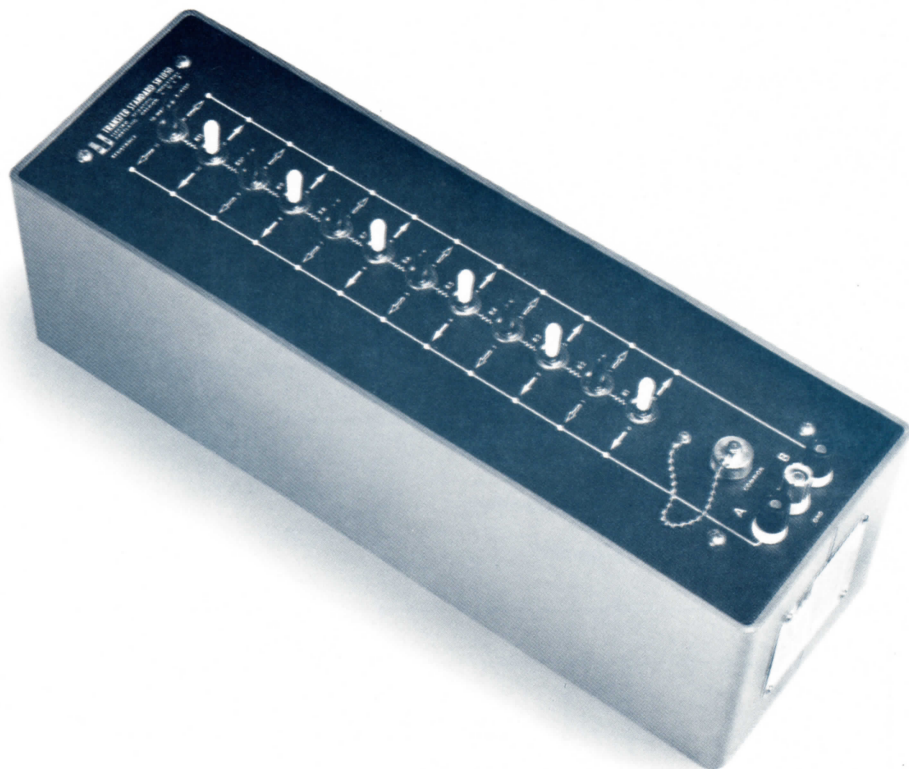


Model SR1050

High-Resistance Transfer Standard

- Resistance transfers from 100k Ω to 110M Ω
- Eleven equal-value precision resistors
- Two models, decade steps 1M Ω to 10M Ω
- Complete control of insulation resistance in resistance transfers



Precise transfer measurements up to 110M Ω relative to a single 100k Ω resistance standard can be obtained with the Model SR1050 High-Resistance Transfer Standard. The unit is available in two models: 1M Ω and 10M Ω resistance sections.

Based on a unique method for establishing known ratios, the Model SR1050 standard utilizes a transfer technique that consists of switching resistance sections in

parallel, series or series-parallel sections. An outstanding design feature is a structure in which the only insulation leakage paths (other than those within each resistance section) are from the external terminals to ground. This eliminates insulation leakage errors in the transfer of calibration from one resistance level to another using three-terminal measurement techniques.

A specially designed lever switch provides a convenient means of switching into parallel

and series-parallel configuration without introducing insulation leakage errors. External shorting or paralleling bars are not necessary. Each resistance section consists of precision wire-wound resistors connected in series. The reduced heat concentration of the series connection improves the thermal characteristics of a resistance element that already has a low temperature coefficient.

Specifications

Standard Values

1 and 10M Ω /step

Accuracy

Transfer	Limited only by short-term repeatability of resistance values. Typical repeatability ± 2 ppm.
Initial	± 25 ppm of nominal value, matched within 10 ppm, for 1M Ω ; ± 30 ppm of nominal value, matched within 10 ppm, for 10M Ω .
Long-Term Calibration	± 50 ppm of nominal value ± 10 ppm for 1M Ω ; 15 ppm for 10M Ω

Calibration Conditions

23°C, low power, three-terminal measurement

Temperature Coefficient

± 5 ppm/ $^{\circ}$ C, matched within 5 ppm/ $^{\circ}$ C

Power Coefficient

± 0.05 ppm/mW per resistor

Maximum Power Rating

1W/step or 5W distributed over 10 steps, or maximum voltage of 2.5kV where this value does not result in power in excess of 1W per resistor.

Breakdown Voltage

3.5kV peak between active terminals and case

Leakage Resistance

Greater than $10^{13}\Omega$ from terminals to case

Calibration Data

Initial calibration readings are affixed to instrument

Dimensions

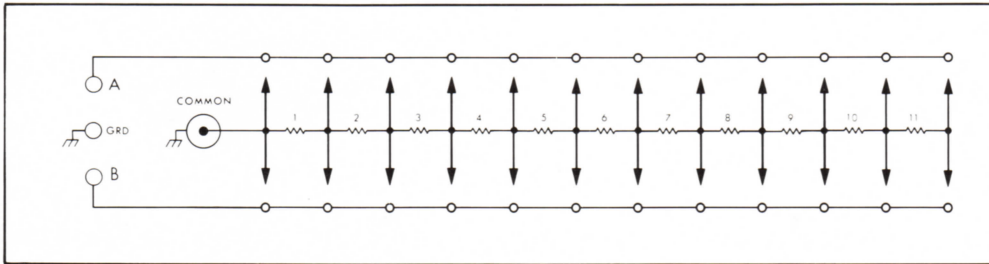
Height 6.4 in. (16.25cm)

Width 17 in. (43.2 cm)

Depth 5.6 in. (14.2 cm)

Weight

8.5 lbs. (3.9kg) net



Standard equipment

Model SR1050 comes with a 6853 instruction manual.