
DT1145

Dekatron® Decade Ratio Transformers

- Bench or panel-mounting
- Dial arrangement minimizes reading errors
- Exceptionally low output impedance



The Dekatron® decade ratio transformers are inductive voltage dividers for use at audio frequencies. They feature high input impedance, low output impedance and low phase shift and are ideal for use as working standards in test setups and calibration laboratories. Applications include voltage and current division, turns-ratio measurement, divider calibration and impedance comparison.

Initial accuracy and long-term stability over a wide range of ambient conditions are assured by the use of gapless toroidal cores of very high permeability. Their inherently stable characteristics assure permanent calibration over wide ranges of temperature, humidity, vibration and shock. A sturdy metal case provides both mechanical protection and electrical shielding.

The Model DT1145 is for panel mounting and has three decades plus an interpolating potentiometer. It features stacked dials, which results in a configuration that requires less than 7 square inches of panel space. For easier mounting, Model DT1145A has an attached square flange.

Specifications

Terminal Linearity* (Initial and Long-Term)
 50Hz to 1kHz: ± 10 ppm (referred to input)
 Above 1kHz: Multiply by $(1 + 0.1f^2\text{kHz})$

*All setting combinations producing the same nominal output voltage remain within the stated linearity specifications.

Number of Decades
 Three, plus interpolating potentiometer

Resolution
 Continuous, 0.001% per dial division

Maximum Ratio
 1.11100

Maximum Phase Shift
 Approximately 0.05mrad/kHz for settings above 0.1

Maximum Input Voltage
 0.35VRMS/Hz, 350V maximum

Maximum Input Current (DC)
 10 μ A

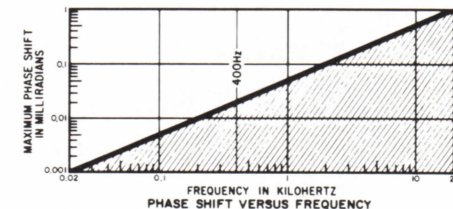
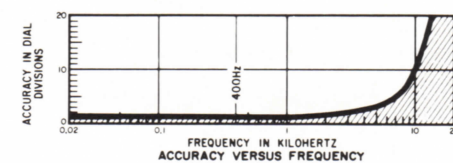
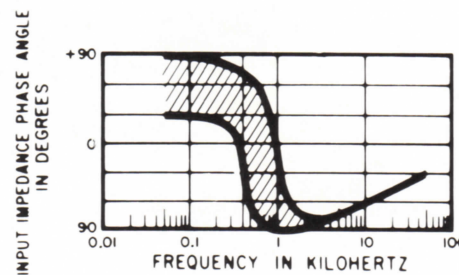
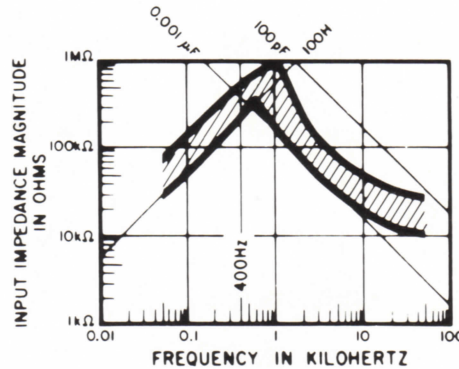
Input Impedance
 High, with no output load. Typical range of measured values for various dial settings and voltages shown in curves.

Input Inductance
 Approximately 100 to 300H depending on excitation

Output Current
 1A maximum

Output Impedance
 Approximately 2.5 Ω maximum in series with 100 μ H

Harmonic Distortion
 $(0.0008 \times f\text{kHz})\%$ of output voltage peak to peak for input voltage less than $(0.35 \times f_{\text{Hz}011})$ VRMS



Model DT 1145

Dimensions

Diameter: 3.35 in. (8.5cm)
 Depth: 7.2 in. (18.3cm)
 Depth: (behind panel) 5.4 in. (13.7cm)

Weight

2.5 lbs (1.1kg) net

Model DT 1145A

Dimensions

Height: 3.5 in. (8.9cm)
 Width: 3.5 in. (8.9cm)
 Depth: 7.2 in. (18.3cm)
 Depth (behind panel) 5.4 in. (13.7cm)

Weight

2.5 lbs (1.1kg) net

Standard Equipment

Model DT1145 comes complete with an 8896 Instruction Sheet.

