

Model DT1145

A C S T A N D A R D S A N D M E A S U R E M E N T I N S T R U M E N T S

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

Dekatron Decade Ratio Transformer

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 interpolation potentiometer. It features stacked dials, which results in a configuration that requires less than seven square inches of panel space.



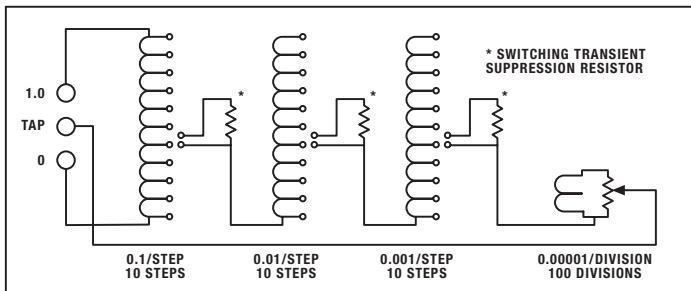
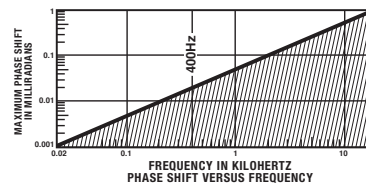
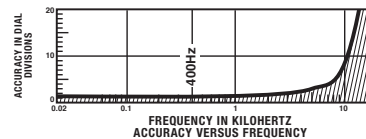
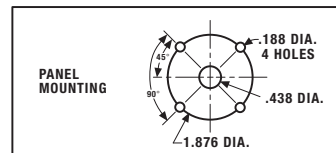
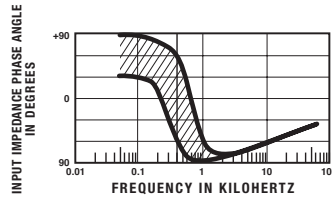
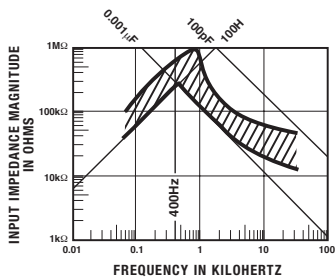
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DEKATRON DECADE RATIO TRANSFORMERS

Specifications

Frequency	50 Hz to 5 kHz
Terminal Linearity* (Initial & Long-Term)	50 Hz to 1 kHz: ± 10 ppm (referenced to input) Above 1 kHz: multiply by $(1 + 0.1f^2 \text{ in kHz})$ *All setting combinations producing the same nominal output voltage remain with 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	0.35 VRMS/Hz, 350 V 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 300 H depending on excitation
Output Current	1 A 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 $(0.35 \times f_{\text{Hz}}^{0.11})$ VRMS
Dimensions	Diameter 8.5 cm (3.35 in) Depth 8.5 cm (7.2 in) Depth (behind panel) 13.7 cm (5.4 in)
Weight	1.1 kg (2.5 lb)

Included Accessories
 Instruction Sheet P/N 8896
 Z540 Compliant Calibration with Certificate and Data for DT1145 P/N OPT-Z540



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