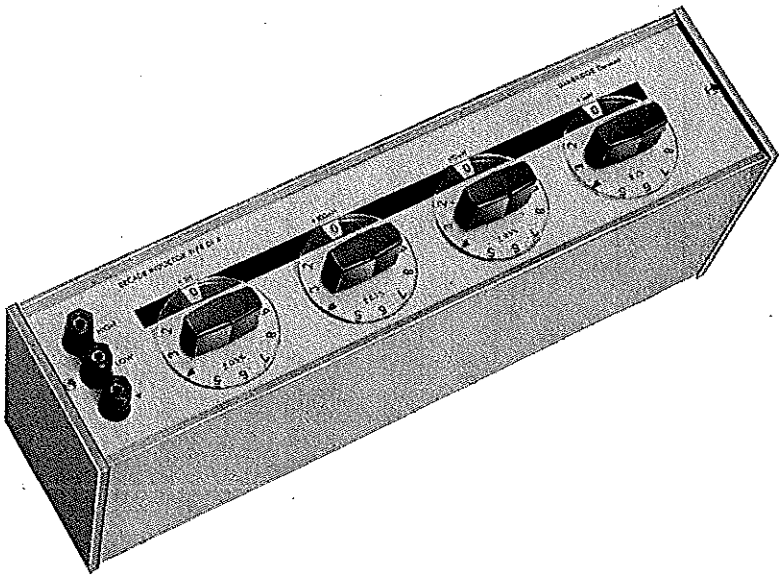
DANBRIDGE
DENMARK

P59.30

FERRITE-CORED DECADE INDUCTOR TYPE DI 4

- IN-LINE READING
- HIGH Q - VALUES
- GOOD ACCURACY
- SMALL DIMENSIONS
- FERRITE CORES



Voir au verso
les courants maximum

This Decade Inductor is useful for laboratory tests and measurements e. g. for determining circuit constants in wave filters, tuned circuits etc. The accuracy and stability of the Inductor allows its use as a secondary standard of inductance. The inductance coils used are wound on ferrite cores providing a high Q value even at the lower audio frequencies.

SPECIFICATION

RANGE

10×1 mH to 10×1 H.

FREQUENCE DEPENDENCY

The stray capacitance shunting the inductors will increase the effective series inductance at high frequencies.
The stray capacitance varies according to which inductors are in circuit and how the earth terminal is connected.
The lowest capacitance is obtained on earthing the terminal adjacent to the earth terminal when the two lowest decades are used.
When only the higher decades are in use the upper terminal should be earthed.
In these cases the stray capacitance varies from 25 to 40 pF.
If – as is normally the case – the inductor is employed in a tuned circuit this capacitance is simply added to the external capacitance in order to obtain the total effective capacitance.
In case the effective series inductance must be determined the percentage increase with frequency can be calculated from

$$\triangle L/L_0\% = L \cdot f^2 \cdot K$$

where L is Inductance in henries, f is Frequency in kc and K is between 0.1 & 0.16 with the highest value for the intermediate decades.

DISSIPATION FACTOR

The curves in Fig. 1 show the dissipation factor as a function of frequency for the separate decades. The

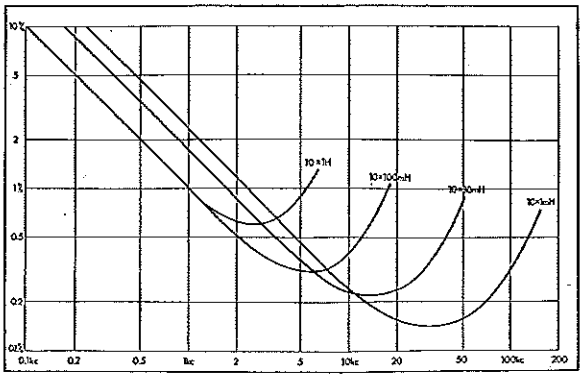


Fig. 1. Dissipation factor as a function of frequency