



Wayne Kerr CORPORATION

22 Frink Street, Montclair, New Jersey 07042 • (201) 746-2438

Innovations in Instrumentation ■ Measurement ■ Analysis ■ Synthesis ■ Control

DM100B Displacement Meter



- Unique Distance Instrumentation Linearized for "Offset-Independent"
- Truly Constant Sensitivity
- Measures Vibration Amplitude with External Oscilloscope Detector

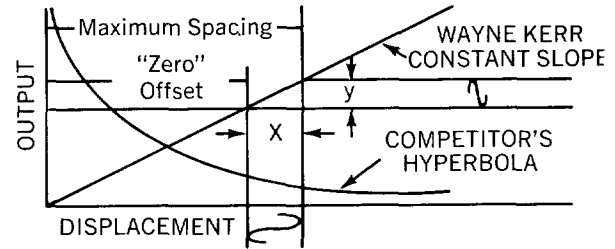
Employing non-contacting or "Weightless" guarded capacitance probes, the DM100B — with accuracy to $\pm 2\%$ of full-scale range — is invaluable for tests on rotating machinery, delicate assemblies, or for any application in which other sensors would impair measurement accuracy by loading the structure under test. Because no physical contact is required, accurate determinations of temperature coefficients, moduli of elasticity, rigidity and bulk, Poisson's ratio, and dilation are possible on fragile samples.

The DM100B measures distances from 50 microinches to $\frac{1}{2}$ inch; when used with an external oscilloscope detector it will also measure vibration amplitude from one microinch. Output is absolutely linear — in direct proportion to the distance of probe from specimen, with no distortion of patterns. Regardless of the distance between probe and test piece, constant sensitivity is maintained due to linear output characteristics.

Recorder and oscilloscope outputs are also useable for alarms, controls, go/no-go sorting. ▶

STRAIGHT LINE CHARACTERISTIC (see figure) GUARANTEES OFFSET IMPEDANCE

Regardless of value of "zero offset", the signal change Y produced by a displacement X is always the same. Ideal for measuring bearing runout, tool wear, eccentricity, dilation, creep, strain, moduli, thicknesses, dielectric constant, etc. Continuous reading, remote indication by recorder and scope outputs. Probe Selector Unit JB-731B switches any one of six probes to input and enables selection of any probe for instant connection to the instrument.



SPECIFICATIONS

Power Requirement:

105-125 volts or 210-250 volts, 40-60 c/s. Consumption approximately 50 W.

Performance:

Probe	Full-scale Range (Inches)	Measurement Accuracy (Inches)	
		10 c/s-10 kc/s	1 c/s-10 c/s
A	0.001	±0.00003	±0.00006
B	0.005	±0.0001	±0.00025
C	0.01	±0.0002	±0.0005
D	0.05	±0.001	±0.0025
E	0.1	±0.002	±0.005
F	0.5	±0.01	±0.025

Note: The above accuracy figures apply to mean distance measurements of peak-to-peak vibration within the frequency bands quoted, in the NORMAL mode.

Discrimination:

Better than 0.5% of full-scale deflection.

Outputs:

Recorder jack sockets provide 1 mA from Distance circuits. Terminals for connection to oscilloscopes, etc., provide 50 ks/c carrier, the maximum amplitude of which is proportional to distance.

Dimensions:

Width: 17 inches (43.2 cm), Height: 11½ inches (29.2 cm), Depth: 7½ inches (19 cm)

Weight:

Approximately 26 pounds. (11.8 kg)

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