

The NewTek MBB Series gaging probes are spring-loaded AC LVDTs with excellent linearity, great precision and infinite resolution. Construction consists of stainless probe assembly and 8 mm diameter housing protected to IP-65. Designed for a wide range of position measurement and dimensional gaging applications, they are available in ranges ± 0.040 in (± 1.0 mm), ± 0.100 in (± 2.5 mm), and ± 0.200 in (± 5 mm). The MBB Series features high precision linear ball bearings for smooth probe movement without stiction and excellent repeatability.

Features

- Diameter available in .315 in (8 mm) and .375 in (9.5 mm)
- Extremely reliable with greater than 100 million cycles
- Measurement ranges ± 0.040 in (± 1.0 mm), ± 0.100 in (± 2.5 mm), and ± 0.200 in (± 5 mm).
- Linearity $< .5\%$ of Full Range
- Repeatability of $0.15 \mu\text{m}$
- Available with threaded sleeve and jam nuts (MBT-375)

Applications

- Dimensional Gaging
- Metal Component Gaging
- Materials Testing
- Roundness Measurements
- Automotive Testing

Electrical Specifications

- Input Voltage:** 3 Vrms (Nominal)
- Input Frequency:** 5kHz (nom)
- Linearity:** $< \pm 0.5\%$ Full Range
- Null Voltage:** 0.5% Full Range
- Hysteresis:** $< 0.01\%$ of Full Range Typical
- Repeatability:** $< 0.01\%$ of Full Range Typical



Environmental Specifications

- Operating Temperature:** 15°F to 175°F (-10°C to 80°C)
- Thermal Coefficient:** $< -0.01\%/^{\circ}\text{F}$ ($< -0.02\%/^{\circ}\text{C}$)
- Humidity:** 90% R.H., 240 Hours

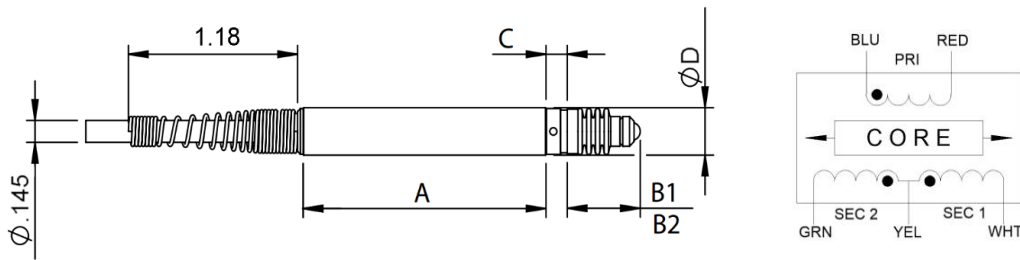
Materials Specifications

- Housing:** Stainless Steel with Optional 3/8-40, UNS 2A External Thread (MBT Series)
- Core:** Hi-permeability nickel-iron alloy
- Magnet Wire:** Film insulated copper
- Connector:** Cable With Lead Wires
- Probe:** Tungsten Carbide Tip

Specifications

Model	MBB-315-040	MBB-315-100	MBB-315-200	MBB-375-040	MBB-375-100	MBB-375-200
Parameter						
Nominal Range (Inches)	± 0.040	± 0.100	± 0.200	± 0.040	± 0.100	± 0.200
Nominal Range (mm)	± 1.0	± 2.5	± 5.0	± 1.0	± 2.5	± 5.0
Sensitivity (mV/V/.001 Inch)	5.3	3.8	2.7	5.3	3.8	2.7
Sensitivity (mV/V/mm)	210	150	105	210	150	105
Tip Force at Mid-span (N)	0.7	0.7	0.7	0.7	0.7	0.7
Dimension " A" (inches) [mm]	1.69 [43]	2.48 [63]	3.42 [87]	1.69 [43]	2.48 [63]	3.42 [87]
Dimension " B1" (inches) [mm]	.55 [14]	.71 [18]	1.0 [25.4]	.55 [14]	.71 [18]	1.0 [25.4]
Dimension " B2" (inches) [mm]	.43 [11]	.47 [12]	.57 [14.5]	.43 [11]	.47 [12]	.57 [14.5]
Dimension " C" (inches) [mm]	.16 [4]	.18 [4.5]	.18 [4.5]	.16 [4]	.18 [4.5]	.18 [4.5]
Dimension " D" (inches) [mm]	.315 [8]	.315 [8]	.315 [8]	.375 [9.5]	.375 [9.5]	.375 [9.5]

Dimensions and Wiring



Ordering Info

MBX - **XXX** - **XXX**
B - Standard Case Outer Measuring Range
T - Threaded Case Diameter **See Table**
315 - 0.315 in

Notes

- Electrical specifications measured at 5 kHz excitation frequency.
- Specifications subject to change.

Warranty

NewTek products are warrantied against defective materials and workmanship for a period of one year from the date of delivery to the original purchaser. NewTek accepts no liability for damages in the misuse of our products.