

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  $\pm 0.040$  in ( $\pm 1.0$  mm),  $\pm 0.100$  in ( $\pm 2.5$  mm), and  $\pm 0.200$  in ( $\pm 5$  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  $\pm 0.040$  in ( $\pm 1.0$  mm),  $\pm 0.100$  in ( $\pm 2.5$  mm), and  $\pm 0.200$  in ( $\pm 5$  mm).
- Linearity < .5% of Full Range
- Repeatability of 0.15  $\mu$ m
- Available with threaded sleeve and jam nuts (MBT-375)

## Applications

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

## Electrical Specifications

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



## Environmental Specifications

<b>Operating Temperature:</b>	15°F to 175°F (-10°C to 80°C)
<b>Thermal Coefficient:</b>	< -0.01%/°F (< -0.02%/°C)
<b>Humidity:</b>	90% R.H., 240 Hours

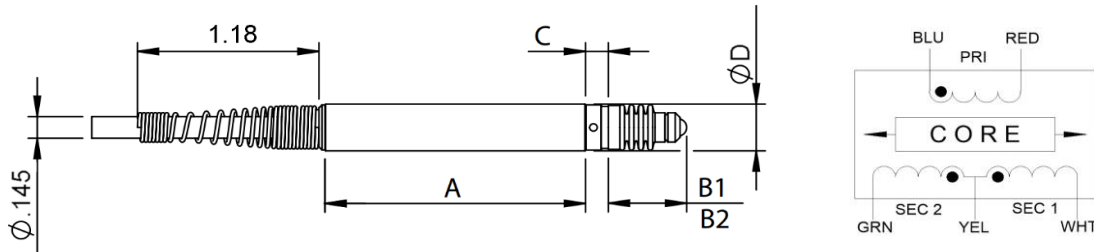
## Materials Specifications

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

## Specifications

Model	MBB-315-040	MBB-315-100	MBB-315-200	MBB-375-040	MBB-375-100	MBB-375-200
<b>Parameter</b>						
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.