The NewTek M Series AC LVDTs are specially designed for applications demanding the highest levels of reliability while performing in the rugged environments that are required for industrial equipment. These transducers consist of a coil assembly potted into a 3/8” diameter housing with a separate moveable core. The M Series are available from ± 0.025 inch (± 0.63 mm) to ± 2.0 inch (±50 mm) and offer high sensitivity, high resolution and excellent linearity.

**Features**

- Rugged 3/8 inch stainless steel housing
- Measurement ranges from ± 0.025 to ± 2 inches
- Linearity ±0.15% of Full Range Typical
- Shock and vibration tolerant
- Operating temperature range: -65°F to 275°F (Standard) or extended temperature range: -65°F to 400°F (optional)
- Choice of imperial or metric threaded core
- Standard and custom models available

**Electrical Specifications**

- Input Voltage: 3 Vrms (Nominal)
- Input Frequency: 400Hz to 10KHz
- Linearity: < ± 0.15% Full Range Typical
- Extended Operating Range: 1.5 X Linear Range
- Null Voltage: 0.5% Full Range
- Hysteresis: <0.01% of Full Range Typical
- Repeatability: <0.01% of Full Range Typical

**Environmental Specifications**

- Operating Temp.; Standard: -65°F to 275°F (-55°C to 135°C)
- Operating Temp.; 400° Option: -65°F to 400°F (-55°C to 204°C)
- Thermal Coefficient: < -0.01%/°F (< -0.02%/°C) of Full Range
- Humidity: 90% R.H., 240 Hours
- Shock Survival: 1000 g, 11 ms
- Vibration: 20 g to 2 KHz

**Materials Specifications**

- Housing: Corrosion-resistant nickel-iron alloy
- Core: Hi-permeability nickel-iron alloy
- Coil Form: Ceramic/Plastic
- Magnet Wire: Film insulated copper
- Lead Wires: # 32 AWG Teflon insulated, 12” long

**Applications**

- Factory automation
- Medical equipment
- Valve position monitoring
- Materials testing
- Dimensional gaging
Specifications

<table>
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<tr>
<th></th>
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<tr>
<td>Parameter</td>
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<tr>
<td>Nominal Range (Inches)</td>
<td>± 0.025</td>
<td>± 0.050</td>
<td>± 0.100</td>
<td>± 0.250</td>
<td>± 0.500</td>
<td>± 1.00</td>
<td>± 2.00</td>
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<tr>
<td>Nominal Range (mm)</td>
<td>± 0.63</td>
<td>± 1.25</td>
<td>± 2.50</td>
<td>± 6.25</td>
<td>± 12.5</td>
<td>± 25.4</td>
<td>± 50.8</td>
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<td>Sensitivity (mV/V/.001 Inch)</td>
<td>3.5</td>
<td>1.7</td>
<td>1.8</td>
<td>2.5</td>
<td>1.7</td>
<td>0.75</td>
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<tr>
<td>Sensitivity (mV/V/mm)</td>
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<td>67</td>
<td>71</td>
<td>98</td>
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<td>30</td>
<td>19.7</td>
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<td>Primary Impedance (Ω)</td>
<td>95</td>
<td>345</td>
<td>345</td>
<td>505</td>
<td>130</td>
<td>240</td>
<td>540</td>
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<tr>
<td>Dimension “A” (Inches)</td>
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<td>0.75</td>
<td>1.00</td>
<td>1.75</td>
<td>3.00</td>
<td>5.50</td>
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<tr>
<td>Dimension “B” (Inches)</td>
<td>0.40</td>
<td>0.60</td>
<td>0.65</td>
<td>1.15</td>
<td>2.00</td>
<td>3.00</td>
<td>5.50</td>
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<tr>
<td>Body Weight (grams)</td>
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<td>6.0</td>
<td>6.0</td>
<td>11.5</td>
<td>18.0</td>
<td>28.0</td>
<td>56</td>
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<tr>
<td>Core Weight (grams)</td>
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<td>0.5</td>
<td>1.0</td>
<td>1.6</td>
<td>2.6</td>
<td>5.2</td>
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</table>

Dimensions and Wiring

Ordering Info

**NT – M – 375**  
Miniature LVDT Series  
XXX  
XXX  
Range (See table)  
Options  
- H: 400°F Temperature  
- R: Mild radiation tolerant  
- M: Metric threaded core  
- V: Vented Housing

Notes

- Electrical specifications measured at 3KHz excitation frequency.
- Additional options are available. Please consult factory for custom designs.
- 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.