The NewTek HA Series sensors are rugged hermetically sealed AC LVDTs with excellent linearity, high sensitivity and infinite resolution. These sensors are constructed of ¾ inch diameter stainless steel and manufactured for general industrial use. Designed for a wide range of position measurement applications, they are available in ranges of ±0.05 inch (1.27mm) to ±10 inches (250mm). The HA Series windings are potted inside the housing with a 2 component epoxy, providing excellent protection against hostile environments.

### Features
- Welded 3/4 inch hermetically sealed steel housing
- Measurement ranges from ± 0.05 to ±10 inches
- Linearity ±0.15% of Full Range Typical
- Shock and vibration tolerant
- Wide operating temperature range (-65°F to 275°F)
- Standard and custom models available

### Applications
- Factory automation
- Materials testing
- Packaging equipment
- Valve position sensing
- Corrosive environments

### Electrical Specifications
- **Input Voltage:** 3 Vrms (Nominal)
- **Input Frequency:** 400Hz to 10KHz
- **Linearity:** < ±0.15% Full Range Typical
- **Null Voltage:** 0.5% Full Range
- **Hysteresis:** <0.01% of Full Range Typical
- **Repeatability:** <0.01% of Full Range Typical

### Environmental Specifications
- **Operating Temperature:** -65°F to 275°F (-55°C to 135°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
- **Magnet Wire:** Film insulated copper
- **Connector:** PT02A-10-6P
HA-750  
Hermetically Sealed AC LVDT

Specifications

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<tr>
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<tbody>
<tr>
<td>Nominal Range (Inches)</td>
<td>± .050</td>
<td>± 0.125</td>
<td>± 0.25</td>
<td>± 0.5</td>
<td>± 1</td>
<td>± 2</td>
<td>± 3</td>
<td>± 4</td>
<td>± 5</td>
<td>± 7.5</td>
<td>± 10</td>
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<tr>
<td>Nominal Range (mm)</td>
<td>± 1.27</td>
<td>± 3.0</td>
<td>± 6.3</td>
<td>± 12.5</td>
<td>± 25.0</td>
<td>± 50.0</td>
<td>± 75.0</td>
<td>± 100.0</td>
<td>± 125.0</td>
<td>± 190.0</td>
<td>± 250.0</td>
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<tr>
<td>Sensitivity (mV/V/0.001 Inch)</td>
<td>6.0</td>
<td>4.0</td>
<td>2.5</td>
<td>0.64</td>
<td>0.40</td>
<td>0.25</td>
<td>0.17</td>
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<td>Sensitivity (mV/V/mm)</td>
<td>238</td>
<td>158</td>
<td>98</td>
<td>25</td>
<td>24</td>
<td>16</td>
<td>10</td>
<td>7.0</td>
<td>4.7</td>
<td>4.3</td>
<td>3.1</td>
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<td>Primary Impedance (Ω)</td>
<td>330</td>
<td>740</td>
<td>1330</td>
<td>1200</td>
<td>1260</td>
<td>2150</td>
<td>2150</td>
<td>425</td>
<td>600</td>
<td>777</td>
<td>625</td>
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<td>Dimension “A” (inches)</td>
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<td>3.33</td>
<td>5.90</td>
<td>7.40</td>
<td>10.90</td>
<td>13.70</td>
<td>16.20</td>
<td>18.65</td>
<td>23.90</td>
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<td>Dimension “B” (inches)</td>
<td>0.80</td>
<td>1.25</td>
<td>1.70</td>
<td>3.50</td>
<td>3.50</td>
<td>5.35</td>
<td>6.20</td>
<td>6.20</td>
<td>6.20</td>
<td>7.00</td>
<td>9.50</td>
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<tr>
<td>Body Weight (ounces)</td>
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<td>3.30</td>
<td>4.30</td>
<td>6.60</td>
<td>6.60</td>
<td>9.20</td>
<td>10.00</td>
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<tr>
<td>Body Weight (grams)</td>
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<td>3</td>
<td>68</td>
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<td>122</td>
<td>180</td>
<td>230</td>
<td>261</td>
<td>280</td>
<td>408</td>
<td>516</td>
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Dimensions and Wiring

![Diagram of dimensions and wiring]

Ordering Info

NT – HA – 750 – XXX  
Hermetically Sealed LVDT Series  
Range (See Table)

Options
- H: 400°F Temperature
- R: Mild Radiation Hardened
- L: ± 0.1% Linearity
- M: Metric Threads

Notes
- Electrical specifications measured at 3kHz excitation frequency.
- Additional options available (extreme temperature, high pressure etc.). Please consult factory for custom designs.
- Specifications subject to change.

Warranty

NewTek products are warranted 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.