The NewTek RV series is a family of RVDT rotary position sensors for industrial applications. RVDT technology is known for reliability and ruggedness in harsh environments. The non-contact design allows for extremely long operational life and reliability and eliminates internal components that might wear or degrade over time. With a non-contact measurement, RVDTs offer good noise performance with excellent repeatability. The NewTek RV series is available in two sizes - The RV 8-30 is a size 8 (0.75 inch diameter) and the RV 11-30 is a size 11 (1.06 inch diameter).

**Electrical Specifications**

- **Input Voltage:** 7.5 Vrms (Nominal)
- **Input Frequency:** 1kHz to 5KHz
- **Linearity:** < ± 0.5% Full Range Typical
- **Null Voltage:** 0.4% Full Range
- **Hysteresis:** <0.01% of Full Range Typical
- **Repeatability:** <0.01% of Full Range Typical

**Environmental Specifications**

- **Operating Temperature:** -65°F to 221°F (-55°C to 105°C)
- **Thermal Coefficient:** < -0.01%/°F (< -0.02%/°C) of Full Range
- **Humidity:** 90% R.H., 240 Hours
- **Shock Survival:** 30 g, 11 ms
- **Vibration:** 20 g to 2 KHz

**Materials Specifications**

- **Housing:** Stainless Steel (RV 8), Aluminum (RV 11)
- **Core:** Hi-permeability nickel-iron alloy
- **Magnet Wire:** Film insulated copper
- **Connector:** Lead Wires

**Applications**

- Actuator Feedback
- Quarter-Turn Valve Position Sensing
- Throttle Position
- Dancer Arm Tensioner Position
- Harsh Environments

**Features**

- Available in ± 30° Range
- Full 360° mechanical travel with no stops
- Excellent Linearity ±0.5% of Full Range
- Shock and vibration tolerant
- Wide operating temperature range (-65°F to 221°F)
- Contactless RVDT Technology

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Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>RV 8-30</th>
<th>RV 11-30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Range</td>
<td>± 30°</td>
<td>± 30°</td>
</tr>
<tr>
<td>Sensitivity (mV/V/°)</td>
<td>13.30</td>
<td>11.0</td>
</tr>
<tr>
<td>Phase Shift</td>
<td>+ 4°</td>
<td>+ 8°</td>
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<tr>
<td>Primary Impedance (Ω)</td>
<td>430</td>
<td>235</td>
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<tr>
<td>Secondary Impedance (Ω)</td>
<td>340</td>
<td>165</td>
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<tr>
<td>Mounting</td>
<td>Size 8 Servo Mount</td>
<td>Size 11 Servo Mount</td>
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<tr>
<td>Mechanical Range</td>
<td>Full 360°</td>
<td>Full 360°</td>
</tr>
<tr>
<td>Body Weight (ounces)</td>
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<td>2.30</td>
</tr>
<tr>
<td>Body Weight (grams)</td>
<td>36</td>
<td>65</td>
</tr>
</tbody>
</table>

Dimensions and Wiring

Ordering Info

RV 8-30

Servo Mount Size ± Degree Measuring Range

Notes

- Electrical specifications measured at 3KHz excitation frequency.
- Additional options available. Please consult factory for custom designs.
- Specifications subject to change without notice.

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.