

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).



Applications

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

Electrical Specifications

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

Features

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

Environmental Specifications

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

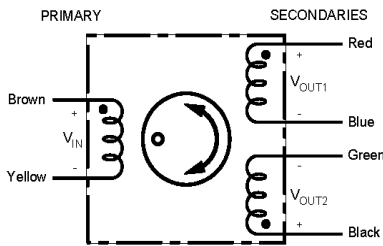
Materials Specifications

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

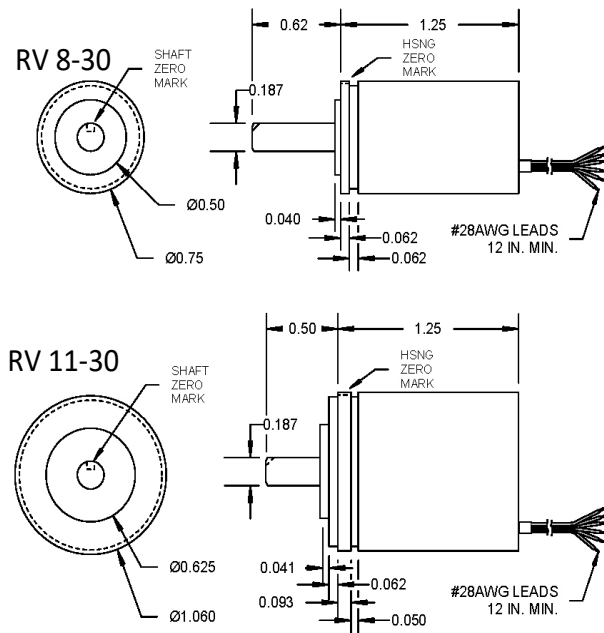
Specifications

Model Parameter	RV 8-30	RV 11-30
Nominal Range	$\pm 30^\circ$	$\pm 30^\circ$
Sensitivity (mV/V/°)	13.30	11.0
Phase Shift	+ 4°	+ 8°
Primary Impedance (Ω)	430	235
Secondary Impedance (Ω)	340	185
Mounting	Size 8 Servo Mount	Size 11 Servo Mount
Mechanical Range	Full 360°	Full 360°
Body Weight (ounces)	1.58	2.30
Body Weight (grams)	36	65

Dimensions and Wiring



Note: Connect Green and Blue for differential operation.



Ordering Info

RV 8-30

Servo Mount Size

\pm 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.