

R60D RVIT

DC-Operated Rotary Variable Inductance Transducer

RVITs are DC operated noncontact rotary transducers. The RVIT proprietary design incorporates a set of printed circuit coils and a conductive spoiler to achieve superior performance and low cost. During operation, the conductive spoiler rotates with the transducer shaft, altering the magnetic field generated by the printed circuit coils. The resulting unbalance is precisely measured using a patented autoplexing circuit. This signal is then converted to a linear DC output signal that is directly proportional to the angle of the rotor shaft. The predominantly digital circuit is very resistant to environmental disturbances and is ideally compatible for use with most digital electronics.

R60D

The R60D rotary transducer is a shorter version of the R30D. Calibrated for use over ± 60 degrees, the R60D offers improved range without sacrificing other performance parameters.

The R60D also has improved resistance to electromagnetic disturbances and built in voltage regulation for guaranteed operation in applications where high noise environments exist.

FEATURE

- ☐ Self Contained Electronics
- ☐ .5% Linearity
- ☐ Infinite Resolution
- ☐ Virtually Infinite Rotational Life

APPLICATIONS

- ☐ Value Position
- ☐ Dancer Arm Position
- ☐ Throttle Position and Feedback

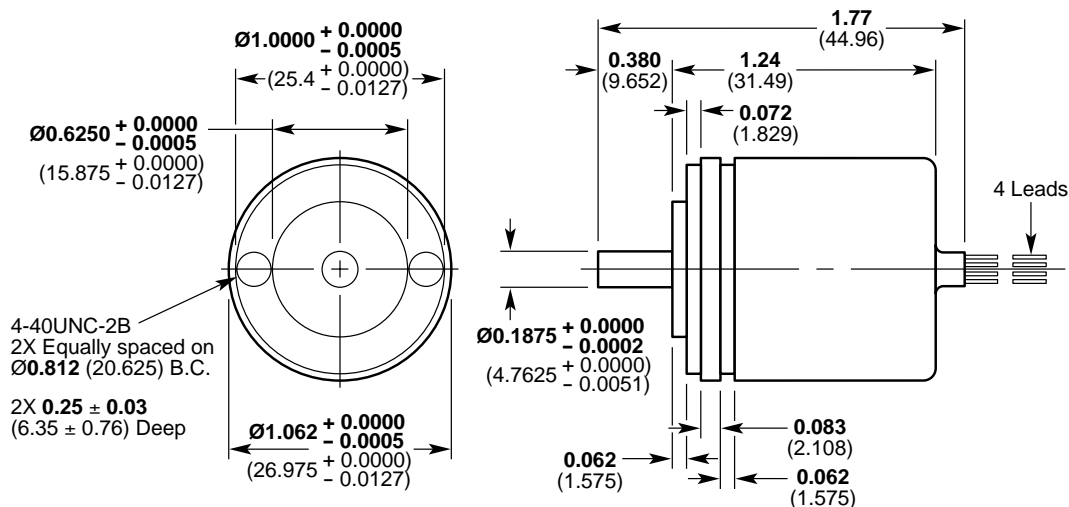


Specifications

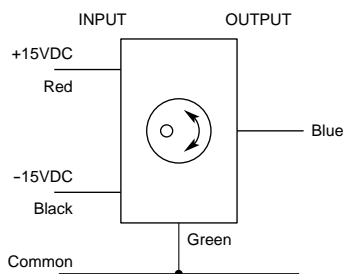
Full Range	$\pm 60^\circ$
Input Voltage (nom)	± 15 VDC
Scale Factor	0.125 V/ $^\circ$
Output Voltage (nom) ...	± 7.5 VDC
Input Current (max)	21 mA
Output Current (max) ...	5 mA
Output Impedance	<1 Ohms
Frequency Response	200 Hz @ -3 dB
Linearity Error*	$\pm 0.50\%$ of full scale output
Nonrepeatability &	
Hysteresis (max)	0.1% of full scale range output maximum
Storage Temperature	
Range	-65°F to 250°F (-55°C to 125°C)
Operating Temperature	
Range	-13°F to 185°F (-25°C to 85°C)
Temperature	
Coefficient of FS	$\pm 0.02\%$ of FS/20°F to 160°F ($\pm 0.04\%$ of FS/-5°C to 70°C)
Lead Wires	24 AWG, PVC insulation, 4 wire, minimum 12" long
Torque	0.12 in-oz (8 gm-cm)
Weight	1.2 oz (34 gm)
Mounting	Size 11 servo mount BU-ORD
Bearings	Matched and preloaded ABEC 3
Shaft Diameter	3/16 in (4.76 mm)
Axial Shaft Bearing	
Load Capability	10 lbs (4.54 kg)
Radial Shaft Bearing	
Load Capability	10 lbs (4.54 kg)
Casing Material	Aluminum

* Units with improved linearity available. Consult factory.

Dimensions in (mm)



Wiring



How to Order

Specify by model number. R-Flex coupler available separately (see page 144).

Model Number	Size	Range
R60D	11	±60°